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Part I

SALUS POPULI SUPREMA LEX ESTO

“The welfare of the people shall be the supreme law.”



JOHN R. ASHCROFT
SECRETARY OF STATE

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IN THIS ISSUE:

PART I

EMERGENCY RULES

Department of Social Services

MO HealthNet Division1991

EXECUTIVE ORDERS1996

PROPOSED RULES

Department of Agriculture

Weights, Measures and Consumer Protection1998

Department of Elementary and Secondary Education

Division of Learning Services2013

Department of Higher Education

Commissioner of Higher Education2020

Department of Labor and Industrial Relations

Division of Labor Standards2021

Department of Natural Resources

Director's Office2039

Air Conservation Commission2039

Dam and Reservoir Safety Council2161

Well Installation2170

PART II

Well Installation2213

Petroleum and Hazardous Substance Storage Tanks2263

Oil and Gas Council2265

Solid Waste Management2280

State Environmental Improvement and Energy Resources

Authority2308

Department of Social Services

MO HealthNet Division2311

Department of Insurance, Financial Institutions

and Professional Registration

State Board of Nursing2319

ORDERS OF RULEMAKING

Department of Agriculture

Market Development2331

Department of Natural Resources

Air Conservation Commission2332

Clean Water Commission2335

Safe Drinking Water Commission2337

Petroleum Storage Tank Insurance Fund Board of

Trustees2338

Department of Public Safety

Peace Officer Standards and Training Program2341

Department of Insurance, Financial Institutions

and Professional Registration

Board of Cosmetology and Barber Examiners2342

Real Estate Appraisers2342

Missouri Board for Respiratory Care2342

Office of Tattooing, Body Piercing, and Branding2343

IN ADDITIONS

Department of Agriculture

Weights, Measures and Consumer Protection2344

Department of Conservation

Conservation Commission2344

CONSTRUCTION TRANSIENT LIST2345

DISSOLUTIONS2405

SOURCE GUIDES

RULE CHANGES SINCE UPDATE2410

EMERGENCY RULES IN EFFECT2429

EXECUTIVE ORDERS2430

REGISTER INDEX2432

Register Filing Deadlines	Register Publication Date	Code Publication Date	Code Effective Date
April 2, 2018	May 1, 2018	May 31, 2018	June 30, 2018
April 16, 2018	May 15, 2018	May 31, 2018	June 30, 2018
May 1, 2018	June 1, 2018	June 30, 2018	July 30, 2018
May 15, 2018	June 15, 2018	June 30, 2018	July 30, 2018
June 1, 2018	July 2, 2018	July 31, 2018	August 30, 2018
June 15, 2018	July 16, 2018	July 31, 2018	August 30, 2018
July 2, 2018	August 1, 2018	August 31, 2018	September 30, 2018
July 16, 2018	August 15, 2018	August 31, 2018	September 30, 2018
August 1, 2018	September 4, 2018	September 30, 2018	October 30, 2018
August 15, 2018	September 17, 2018	September 30, 2018	October 30, 2018
September 4, 2018	October 1, 2018	October 31, 2018	November 30, 2018
September 17, 2018	October 15, 2018	October 31, 2018	November 30, 2018

Documents will be accepted for filing on all regular workdays from 8:00 a.m. until 5:00 p.m. We encourage early filings to facilitate the timely publication of the *Missouri Register*. Orders of Rulemaking appearing in the *Missouri Register* will be published in the *Code of State Regulations* and become effective as listed in the chart above. Advance notice of large volume filings will facilitate their timely publication. We reserve the right to change the schedule due to special circumstances. Please check the latest publication to verify that no changes have been made in this schedule. To review the entire year's schedule, please check out the website at www.sos.mo.gov/adrules/pubsched.

HOW TO CITE RULES AND RSMO

RULES

The rules are codified in the *Code of State Regulations* in this system–

Title		Division	Chapter	Rule
3	CSR	10-	4	.115
Department	<i>Code of State Regulations</i>	Agency Division	General area regulated	Specific area regulated

and should be cited in this manner: 3 CSR 10-4.115.

Each department of state government is assigned a title. Each agency or division in the department is assigned a division number. The agency then groups its rules into general subject matter areas called chapters and specific areas called rules. Within a rule, the first breakdown is called a section and is designated as (1). Subsection is (A) with further breakdown into paragraphs 1., subparagraphs A., parts (I), subparts (a), items I. and subitems a.

The rule is properly cited by using the full citation, for example, 3 CSR 10-4.115 NOT Rule 10-4.115.

Citations of RSMo are to the *Missouri Revised Statutes* as of the date indicated.

Code and Register on the Internet

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The *Code* address is www.sos.mo.gov/adrules/csr/csr

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These websites contain rulemakings and regulations as they appear in the *Code* and *Registers*.

Rules appearing under this heading are filed under the authority granted by section 536.025, RSMo 2000. An emergency rule may be adopted by an agency if the agency finds that an immediate danger to the public health, safety, or welfare, or a compelling governmental interest requires emergency action; follows procedures best calculated to assure fairness to all interested persons and parties under the circumstances; follows procedures which comply with the protections extended by the *Missouri* and the *United States Constitutions*; limits the scope of such rule to the circumstances creating an emergency and requiring emergency procedure, and at the time of or prior to the adoption of such rule files with the secretary of state the text of the rule together with the specific facts, reasons, and findings which support its conclusion that there is an immediate danger to the public health, safety, or welfare which can be met only through the adoption of such rule and its reasons for concluding that the procedure employed is fair to all interested persons and parties under the circumstances.

Rules filed as emergency rules may be effective not less than ten (10) days after filing or at such later date as may be specified in the rule and may be terminated at any time by the state agency by filing an order with the secretary of state fixing the date of such termination, which order shall be published by the secretary of state in the *Missouri Register* as soon as practicable.

All emergency rules must state the period during which they are in effect, and in no case can they be in effect more than one hundred eighty (180) calendar days or thirty (30) legislative days, whichever period is longer. Emergency rules are not renewable, although an agency may at any time adopt an identical rule under the normal rulemaking procedures.

Title 13—DEPARTMENT OF SOCIAL SERVICES Division 70—MO HealthNet Division Chapter 15—Hospital Program

EMERGENCY AMENDMENT

13 CSR 70-15.010 Inpatient Hospital Services Reimbursement Plan; Outpatient Hospital Services Reimbursement Methodology.
The division is amending subsections (3)(B) and (15)(B).

PURPOSE: *This amendment provides for the State Fiscal Year (SFY) 2019 trend factor to be applied in determining Federal Reimbursement Allowance (FRA) funded hospital payments for SFY 2019 along with updates to the calculation of the SFY 2019 Direct Medicaid payments.*

EMERGENCY STATEMENT: *The Department of Social Services, MO HealthNet Division (MHD) finds that this emergency amendment is necessary to preserve a compelling governmental interest of collecting state revenue in order to provide health care to individuals eligible for the MO HealthNet program and for the uninsured. An early effective date is required because this emergency amendment establishes the Federal Reimbursement Allowance (FRA) funded hospital payments for dates of service beginning July 1, 2018 in regulation to ensure that quality health care continues to be provided to MO HealthNet participants and indigent patients at hospitals that have relied on MO HealthNet payments to meet those patients' needs. The division uses the best information available for the trend for the*

*upcoming state fiscal year so it is using the trend published in the First Quarter Healthcare Cost Review publication which is generally not available until May. The division must also analyze hospital data, which is not complete until near the end of the state fiscal year, in conjunction with the trend and funding to determine the appropriate level of payments. Without this information, the trends cannot be determined; therefore, due to timing of the receipt of this information and the necessary July 1, 2018 effective date, an emergency regulation is necessary. As a result, the MHD finds an immediate danger to public health and welfare which requires emergency actions. If this emergency amendment is not enacted, there would be significant cash flow shortages causing a financial strain on Missouri hospitals which serve approximately nine hundred seventy-one thousand (971,000) MO HealthNet participants plus the uninsured. This financial strain, in turn, will result in an adverse impact on the health, safety, and welfare of MO HealthNet participants and uninsured individuals in need of medical treatment. This emergency amendment limits its scope to the circumstances creating the emergency and complies with the protections extended by the *Missouri* and *United States Constitutions*. The MHD believes this emergency amendment to be fair to all interested persons and parties under the circumstances. The emergency amendment was filed June 21, 2018, becomes effective July 1, 2018, and expires February 28, 2019.*

(3) Per Diem Reimbursement Rate Computation. Each hospital shall receive a MO HealthNet per diem rate based on the following computation:

(B) Trend Indices (TI). Trend indices are determined based on the four- (4-) quarter average DRI Index for DRI-Type Hospital Market Basket as published in *Health Care Costs* by DRI/McGraw-Hill for each State Fiscal Year (SFY) 1995 to 1998. Trend indices starting in SFY 1999 will be determined based on CPI Hospital index as published in *Health Care Costs* by DRI/McGraw-Hill, or equivalent publication, regardless of any changes in the name of the publication or publisher, for each State Fiscal Year (SFY). Trend indices starting in SFY 2016 will be determined based on the Hospital Market Basket index as published in *Healthcare Cost Review* by Institute of Health Systems (IHS), or equivalent publication, regardless of any changes in the name of the publication or publisher, for each State Fiscal Year (SFY).

1. The TI are—

- A. SFY 1994—4.6%
- B. SFY 1995—4.45%
- C. SFY 1996—4.575%
- D. SFY 1997—4.05%
- E. SFY 1998—3.1%
- F. SFY 1999—3.8%
- G. SFY 2000—4.0%
- H. SFY 2001—4.6%
- I. SFY 2002—4.8%
- J. SFY 2003—5.0%
- K. SFY 2004—6.2%
- L. SFY 2005—6.7%
- M. SFY 2006—5.7%
- N. SFY 2007—5.9%
- O. SFY 2008—5.5%
- P. SFY 2009—5.5%
- Q. SFY 2010—3.9%
- R. SFY 2011—3.2%—The 3.2% trend shall not be applied in

determining the per diem rate, Direct Medicaid payments, or uninsured payments.

- S. SFY 2012—4.0%
- T. SFY 2013—4.4%
- U. SFY 2014—3.7%
- V. SFY 2015—4.3%
- W. SFY 2016—2.5%

X. SFY 2017—2.7%

Y. SFY 2018—3.2%

Z. SFY 2019—2.8%

2. The TI for SFY 1996 through SFY 1998 are applied as a full percentage to the OC of the per diem rate and for SFY 1999 the OC of the June 30, 1998, rate shall be trended by 1.2% and for SFY 2000 the OC of the June 30, 1999, rate shall be trended by 2.4%. The OC of the June 30, 2000, rate shall be trended by 1.95% for SFY 2001.

3. The per diem rate shall be reduced as necessary to avoid any negative Direct Medicaid payments computed in accordance with subsection (15)(B).

4. A facility previously enrolled for participation in the MO HealthNet Program, which either voluntarily or involuntarily terminates its participation in the MO HealthNet Program and which reenters the MO HealthNet Program, will receive the same inpatient rate and outpatient rate as the previous owner/operator. Such facility will also receive the same Direct Medicaid Add-On Payment and Uninsured Add-On Payment as the previous owner/operator if the facility reenters the MO HealthNet Program during the same state fiscal year. If the facility does not reenter during the same state fiscal year, the Direct Medicaid Add-On Payment and Uninsured Add-On Payment will be determined based on the applicable base year data (i.e., fourth prior year cost report for the Direct Medicaid Payment; see 13 CSR 70-15.220 for the applicable data for the Uninsured Add-On Payment). If the facility does not have the applicable base year data, the Direct Medicaid Add-On Payment and the Uninsured Add-On Payment will be based on the most recent audited data available and will include annual trend factor adjustments from the year subsequent to the cost report period through the state fiscal year for which the payments are being determined.

(15) Direct Medicaid Payments.

(B) Direct Medicaid payment will be computed as follows:

1. The MO HealthNet share of the inpatient FRA assessment will be calculated by dividing the hospital's inpatient Medicaid patient days by the total inpatient hospital patient days from the hospital's base cost report to arrive at the inpatient Medicaid utilization percentage. This percentage is then multiplied by the inpatient FRA assessment for the current SFY to arrive at the increased allowable MO HealthNet costs for the inpatient FRA assessment. The MO HealthNet share of the outpatient FRA assessment will be calculated by dividing the hospital's outpatient MO HealthNet charges by the total outpatient hospital charges from the base cost report to arrive at the MO HealthNet utilization percentage. This percentage is then multiplied by the outpatient FRA assessment for the current SFY to arrive at the increased allowable MO HealthNet costs for the outpatient FRA assessment.

A. Effective for payments made on or after May 1, 2017, only the Fee-for-Service and Out-of-State components of the MO HealthNet share of both the inpatient and outpatient FRA assessment will be included in the Direct Medicaid add-on payment.

2. The unreimbursed MO HealthNet costs are determined by subtracting the hospital's per diem rate from its trended per diem costs. The difference is multiplied by the estimated MO HealthNet patient days for the current SFY plus the out-of-state days from the fourth prior year cost report trended to the current SFY. The estimated MO HealthNet patient days for the current SFY shall be the better of the sum of the Fee-for-Service (FFS) days plus managed care days or the days used in the prior SFY's Direct Medicaid payment calculation. The FFS days are determined from a regression analysis of the hospital's FFS days from February 1999 through December of the second prior SFY. The managed care days are based on the FFS days determined from the regression analysis, as follows: The FFS days are factored up by the percentage of FFS days to the total of FFS days plus managed care days from the hospital's fourth prior year cost report. The difference between the FFS days and the FFS days factored up by the FFS days' percentage are the managed care days.

A. Effective January 1, 2010, the estimated MO HealthNet patient days shall be the better of the sum of the FFS days plus managed care days or the days used in the prior SFY's Direct Medicaid payment calculation (i.e., for SFY 2010, prior SFY would be SFY 2009) adjusted downward by twenty-five percent (25%) of the difference between the sum of the FFS days plus managed care days and the days used in the prior SFY's Direct Medicaid payment calculation.

(I) The FFS days plus managed care days are determined as follows: The FFS days are determined by applying a trend to the second prior Calendar Year (CY) days (i.e., for SFY 2010, second prior CY would be 2008) as determined from the state's Medicaid Management Information System (MMIS). The trend is determined from a regression analysis of the hospital's FFS days from February 1999 through December of the second prior CY. The managed care days are based on the FFS days determined from the regression analysis, as follows: The FFS days are factored up by the percentage of FFS days to the total of FFS days plus managed care days from the hospital's fourth prior year cost report. The difference between the FFS days and the FFS days factored up by the FFS days' percentage are the managed care days.

(II) The days used in the prior SFY's Direct Medicaid payment calculation adjusted downward by twenty-five percent (25%) are determined as follows: The days used in the prior SFY's Direct Medicaid payment calculation are compared to the sum of the FFS days plus managed care days as determined in part (15)(B)2.A.(I). If the hospital has greater estimated days as used in the prior SFY's Direct Medicaid payment calculation than the sum of the FFS days plus managed care days as determined in part (15)(B)2.A.(I), the difference between the days is multiplied by twenty-five percent (25%), and this amount is removed from the estimated days used in the prior SFY's Direct Medicaid payment calculation to arrive at the current year's estimated days.

B. Effective July 1, 2010, the estimated MO HealthNet patient days shall be the better of the sum of the FFS days plus managed care days or the days used in the SFY 2009 Direct Medicaid payment calculation adjusted downward by fifty percent (50%) of the difference between the sum of the FFS days plus managed care days and the days used in the SFY 2009 Direct Medicaid payment calculation.

(I) The FFS days plus managed care days are determined as set forth in part (15)(B)2.A.(I).

(II) The days used in the prior SFY's Direct Medicaid payment calculation adjusted downward by fifty percent (50%) are determined as follows: The days used in the prior SFY's Direct Medicaid payment calculation are compared to the sum of the FFS days plus managed care days as determined in part (15)(B)2.A.(I). If the hospital has greater estimated days as used in the prior SFY's Direct Medicaid payment calculation than the sum of the FFS days plus managed care days as determined in part (15)(B)2.A.(I), the difference between the days is multiplied by fifty percent (50%) and this amount is removed from the estimated days used in the prior SFY's Direct Medicaid payment calculation to arrive at the current year's estimated days.

C. Effective July 1, 2011, the estimated MO HealthNet patient days shall be the better of the sum of the FFS days plus managed care days or the days used in the SFY 2009 Direct Medicaid payment calculation adjusted downward by seventy-five percent (75%) of the difference between the sum of the FFS days plus managed care days and the days used in the SFY 2009 Direct Medicaid payment calculation.

(I) The FFS days plus managed care days are determined as set forth in part (15)(B)2.A.(I).

(II) The days used in the prior SFY's Direct Medicaid payment calculation adjusted downward by seventy-five percent (75%) are determined as follows: The days used in the prior SFY's Direct Medicaid payment calculation are compared to the sum of the FFS days plus managed care days as determined in part (15)(B)2.A.(I). If

the hospital has greater estimated days as used in the prior SFY's Direct Medicaid payment calculation than the sum of the FFS days plus managed care days as determined in part (15)(B)2.A.(I), the difference between the days is multiplied by seventy-five percent (75%) and this amount is removed from the estimated days used in the prior SFY's Direct Medicaid payment calculation to arrive at the current year's estimated days.

D. Effective July 1, 2012, the estimated MO HealthNet patient days shall be the sum of the FFS days plus managed care days. The FFS days plus managed care days are determined as set forth in part (15)(B)2.A.(I).

E. Effective for payments made on or after May 1, 2017, the estimated MO HealthNet patient days for the SFY shall be determined by adjusting the FFS days from the state's MMIS for the second prior Calendar Year (CY) (i.e., for SFY 2017, second prior CY would be 2015) by:

(I) The trend determined from a regression analysis of the hospital's FFS days from February 1999 through December of the second prior CY; and

(II) The days estimated to shift from FFS to managed care effective May 1, 2017. The estimated managed care days for populations added to managed care beginning May 1, 2017 will be subtracted from the trended FFS days to yield the estimated MO HealthNet patient days.

F. Effective for payments made on or after July 1, 2018, the estimated MO HealthNet patient days for the SFY shall be determined by adjusting the FFS days from the state's MMIS for the second prior Calendar Year (CY) (i.e., for SFY 2019, second prior CY would be 2017) by:

(I) The trend determined from a regression analysis of the hospital's FFS days from February 1999 through December of the second prior CY;

(II) A percentage adjustment shall be applied to the regression due to statewide managed care;

(III) The FFS days are factored up by the percentage of FFS days to the total of FFS days plus managed care days from the hospital's fourth prior year cost report to yield the estimated MO HealthNet patient days; and

(IV) From the total estimated MO HealthNet patient days, remove the SFY 2019 estimated managed care days to yield the estimated MO HealthNet FFS patient days.

/F./G. The trended cost per day is calculated by trending the base year costs per day by the trend indices listed in paragraph (3)(B)1., using the rate calculation in subsection (3)(A). In addition to the trend indices applied to inflate base period costs to the current fiscal year, base year costs will be further adjusted by a Missouri Specific Trend. The Missouri Specific Trend will be used to address the fact that costs for Missouri inpatient care of MO HealthNet residents have historically exceeded the compounded inflation rates estimated using national hospital indices for a significant number of hospitals. The Missouri Specific Trend will be applied at one and one-half percent (1.5%) per year to the hospital's base year. For example, hospitals with a 1998 base year will receive an additional six percent (6%) trend, and hospitals with a 1999 base year will receive an additional four and one-half percent (4.5%) trend.

(I) Effective for dates of service beginning July 1, 2010, the Missouri Specific Trend shall no longer be applied to inflate base period costs.

/G./H. For hospitals that meet the requirements in paragraphs (6)(A)1., (6)(A)2., and (6)(A)4. of this rule (safety net hospitals), the base year cost report may be from the third prior year, the fourth prior year, or the fifth prior year. For hospitals that meet the requirements in paragraphs (6)(A)1. and (6)(A)3. of this rule (first tier Disproportionate Share Hospitals), the base year operating costs may be the third or fourth prior year cost report. The MO HealthNet Division shall exercise its sole discretion as to which report is most representative of costs. For all other hospitals, the base year operating costs are based on the fourth prior year cost report. For any hos-

pital that has both a twelve- (12-) month cost report and a partial year cost report, its base period cost report for that year will be the twelve- (12-) month cost report.

/H./I. The trended cost per day does not include the costs associated with the FRA assessment, the application of minimum utilization, the utilization adjustment, and the poison control costs computed in paragraphs (15)(B)1., 3., 4., and 5.;

3. The minimum utilization costs for capital and medical education is calculated by determining the difference in the hospital's cost per day when applying the minimum utilization, as identified in paragraph (5)(C)4., and without applying the minimum utilization. The difference in the cost per day is multiplied by the estimated MO HealthNet patient days for the SFY;

4. The utilization adjustment cost is determined by estimating the number of MO HealthNet inpatient days the hospital will not provide as a result of the managed care health plans limiting inpatient hospital services. These days are multiplied by the hospital's cost per day to determine the total cost associated with these days. This cost is divided by the remaining total patient days from its base period cost report to arrive at the increased cost per day. This increased cost per day is multiplied by the estimated MO HealthNet days for the current SFY to arrive at the MO HealthNet utilization adjustment.

A. Effective January 1, 2010, hospitals other than safety net hospitals as defined in subsection (6)(B) will receive sixty-seven percent (67%) of the utilization adjustment calculated in accordance with paragraph (15)(B)4. Safety net hospitals will continue to receive one hundred percent (100%) of the adjustment calculated in accordance with paragraph (15)(B)4.

B. Effective July 1, 2010, hospitals other than safety net hospitals as defined in subsection (6)(B), children's hospitals as defined in subsection (2)(S), and specialty pediatric hospitals as defined in subsection (2)(P) will receive thirty-four percent (34%) of the utilization adjustment calculated in accordance with paragraph (15)(B)4. Children's hospitals and specialty pediatric hospitals will receive fifty percent (50%) of the adjustment calculated in accordance with paragraph (15)(B)4. Safety net hospitals will continue to receive one hundred percent (100%) of the adjustment calculated in accordance with paragraph (15)(B)4.

C. Effective July 1, 2011, the utilization adjustment will no longer apply to any hospital other than safety net hospitals as defined in subsection (6)(B), children's hospitals as defined in subsection (2)(S), and specialty pediatric hospitals as defined in subsection (2)(P). Children's hospitals and specialty pediatric hospitals will continue to receive fifty percent (50%) of the adjustment calculated in accordance with paragraph (15)(B)4. Safety net hospitals will continue to receive one hundred percent (100%) of the adjustment calculated in accordance with paragraph (15)(B)4.;

5. The poison control cost shall reimburse the hospital for the prorated MO HealthNet managed care cost. It will be calculated by multiplying the estimated MO HealthNet share of the poison control costs by the percentage of managed care participants to total MO HealthNet participants; and

6. Prior to July 1, 2006, the costs for including out-of-state Medicaid days is calculated by subtracting the hospital's per diem rate from its trended per diem cost and multiplying this difference by the out-of-state Medicaid days from the base year cost report. Effective July 1, 2006, the costs for including out-of-state Medicaid days is calculated by subtracting the hospital's per diem rate from its trended per diem cost and multiplying this difference by the out-of-state Medicaid days as determined from the regression analysis performed using the out-of-state days from the fourth, fifth, and sixth prior year cost reports.

AUTHORITY: sections 208.152, 208.153, [and] 208.201, and 660.017, RSMo 2016. This rule was previously filed as 13 CSR 40-81.050. Original rule filed Feb. 13, 1969, effective Feb. 23, 1969. For intervening history, please consult the Code of State Regulations. Emergency amendment filed June 21, 2018, effective

July 1, 2018, expires Feb. 28, 2019. A proposed amendment covering this same material is published in this issue of the *Missouri Register*.

Title 13—DEPARTMENT OF SOCIAL SERVICES
Division 70—MO HealthNet Division
Chapter 15—Hospital Program

EMERGENCY AMENDMENT

13 CSR 70-15.110 Federal Reimbursement Allowance (FRA). The division is amending subsection (1)(A) and adding section (22).

PURPOSE: This amendment provides for the State Fiscal Year (SFY) 2019 trend factor to be applied to the inpatient and outpatient adjusted net revenues determined from the Federal Reimbursement Allowance (FRA) fiscal year cost report to determine the inpatient and outpatient adjusted net revenues subject to the FRA assessment. Additionally, this amendment establishes the FRA assessment effective July 1, 2018 at a rate of five and sixty hundredths percent (5.60%) of each hospital's inpatient and outpatient adjusted net revenues.

EMERGENCY STATEMENT: The Department of Social Services, MO HealthNet Division (MHD) finds that this emergency amendment is necessary to preserve a compelling governmental interest of collecting state revenue in order to provide health care to individuals eligible for the MO HealthNet program and for the uninsured. An early effective date is required because the emergency amendment is necessary to establish the Federal Reimbursement Allowance (FRA) assessment rate effective for dates of service beginning July 1, 2018 in regulation in order to collect the state revenue to ensure access to hospital services for MO HealthNet participants and indigent patients at hospitals that have relied on MO HealthNet payments to meet those patients' needs. The Missouri Partnership Plan between the Centers for Medicare and Medicaid Services (CMS) and the Missouri Department of Social Services (DSS), which establishes a process whereby CMS and DSS determine the permissibility of the funding source used by Missouri to fund its share of the MO HealthNet program, is based on a state fiscal year. In order to determine the trends for State Fiscal Year (SFY) 2019, all relevant information from the necessary sources must be available to MHD. The division uses the best information available when it starts calculating the assessment so it uses the trend published in the Fourth Quarter Healthcare Cost Review publication which is generally not available until January. The division must also analyze hospital revenue data, which is not complete until near the end of the state fiscal year, in conjunction with the trend and hospital FRA funded payments to determine the appropriate level of assessment. Without this information, the trends cannot be determined. Therefore, due to timing of the receipt of this information and the necessary July 1, 2018 effective date, an emergency regulation is necessary. The MHD also finds an immediate danger to public health and welfare which requires emergency actions. If this emergency amendment is not enacted, hospitals will be over-assessed causing a financial strain on Missouri hospitals which serve approximately nine hundred seventy-one thousand (971,000) MO HealthNet participants plus the uninsured. This financial strain, in turn, will result in an adverse impact on the health, safety, and welfare of MO HealthNet participants and uninsured individuals in need of medical treatment. This emergency amendment will result in an increase of FRA Assessment of approximately \$32.5 million to the hospital industry. A proposed amendment, which covers the same material, will be published in the *Missouri Register*. This emergency amendment limits its scope to the circumstances creating the emergency and complies with the protections extended by the *Missouri and United States Constitutions*. The MHD believes this emergency amendment to be fair to all interested persons and parties under the circumstances. The emergency amendment was filed June

21, 2018, becomes effective July 1, 2018, and expires February 28, 2019.

(1) Federal Reimbursement Allowance (FRA). FRA shall be assessed as described in this section.

(A) Definitions.

1. Bad debts—Amounts considered to be uncollectible from accounts and notes receivable that were created or acquired in providing services. Allowable bad debts include the costs of caring for patients who have insurance, but their insurance does not cover the particular service procedures or treatment rendered.

2. Base cost report—Desk-reviewed Medicare/Medicaid cost report. The Medicare/Medicaid Cost Report version 2552-96 (CMS 2552-96) shall be used for fiscal years ending on or after September 30, 1996. The Medicare/Medicaid Cost Report version 2552-10 (CMS 2552-10) shall be used for fiscal years beginning on and after May 1, 2010. When a hospital has more than one (1) cost report with periods ending in the base year, the cost report covering a full twelve- (12-) month period will be used. If none of the cost reports covers a full twelve (12) months, the cost report with the latest period will be used. If a hospital's base cost report is less than or greater than a twelve- (12-) month period, the data shall be adjusted, based on the number of months reflected in the base cost report, to a twelve- (12-) month period.

3. Charity care—Those charges written off by a hospital based on the hospital's policy to provide health care services free of charge or at a reduced charge because of the indigence or medical indigence of the patient.

4. Contractual allowances—Difference between established rates for covered services and the amount paid by third-party payers under contractual agreements. The Federal Reimbursement Allowance (FRA) is a cost to the hospital, regardless of how the FRA is remitted to the MO HealthNet Division, and shall not be included in contractual allowances for determining revenues. Any redistributions of MO HealthNet payments by private entities acting at the request of participating health care providers shall not be included in contractual allowances or determining revenues or cost of patient care.

5. Department—Department of Social Services.

6. Director—Director of the Department of Social Services.

7. Division—MO HealthNet Division, Department of Social Services.

8. Engaging in the business of providing inpatient health care—Accepting payment for inpatient services rendered.

9. Federal Reimbursement Allowance (FRA)—The fee assessed to hospitals for the privilege of engaging in the business of providing inpatient health care in Missouri. The FRA is an allowable cost to the hospital.

10. Fiscal period—Twelve- (12-) month reporting period determined by each hospital.

11. Gross hospital service charges—Total charges made by the hospital for inpatient and outpatient hospital services that are covered under 13 CSR 70-15.010.

12. Hospital—A place devoted primarily to the maintenance and operation of facilities for the diagnosis, treatment, or care for not fewer than twenty-four (24) hours in any week of three (3) or more nonrelated individuals suffering from illness, disease, injury, deformity, or other abnormal physical conditions; or a place devoted primarily to provide, for not fewer than twenty-four (24) hours in any week, medical or nursing care for three (3) or more nonrelated individuals. The term hospital does not include convalescent, nursing, shelter, or boarding homes as defined in Chapter 198, RSMo.

13. Hospital revenues subject to FRA assessment effective July 1, 2008—Each hospital's inpatient adjusted net revenues and outpatient adjusted net revenues subject to the FRA assessment will be determined as follows:

A. Obtain "Gross Total Charges" from Worksheet G-2, Line 25, Column 3 from CMS 2552-96, or Worksheet G-2, Line 28,

Column 3 from CMS 2552-10, of the third prior year cost report (i.e., FRA fiscal year cost report) for the hospital. Charges shall exclude revenues for physician services. Charges related to activities subject to the Missouri taxes assessed for outpatient retail pharmacies and nursing facility services shall also be excluded. "Gross Total Charges" will be reduced by the following:

(I) "Nursing Facility Charges" from Worksheet C, Part I, Line 35, Column 6 from CMS 2552-96, or Worksheet C, Part I, Line 45, Column 6 from CMS 2552-10;

(II) "Swing Bed Nursing Facility Charges" from Worksheet G-2, Line 5, Column 1 from CMS 2552-96, or Worksheet G-2, Line 6, Column 1 from CMS 2552-10;

(III) "Nursing Facility Ancillary Charges" as determined from the Department of Social Services, MO HealthNet Division, nursing home cost report. (Note: To the extent that the gross hospital charges, as specified in subparagraph (1)(A)13.A. above, include long-term care charges, the charges to be excluded through this step shall include all long-term care ancillary charges including skilled nursing facility, nursing facility, and other long-term care providers based at the hospital that are subject to the state's provider tax on nursing facility services.);

(IV) "Distinct Part Ambulatory Surgical Center Charges" from Worksheet G-2, Line 22, Column 2 from CMS 2552-96, or Worksheet G-2, Line 25, Column 2 from CMS 2552-10;

(V) "Ambulance Charges" from Worksheet C, Part I, Line 65, Column 7 from CMS 2552-96, or Worksheet C, Part I, Line 95, Column 7 from CMS 2552-10;

(VI) "Home Health Charges" from Worksheet G-2, Line 19, Column 2 from CMS 2552-96, or Worksheet G-2, Line 22, Column 2 from CMS 2552-10;

(VII) "Total Rural Health Clinic Charges" from Worksheet C, Part I, Column 7, Lines 63.50–63.59 from CMS 2552-96, or Worksheet C, Part I, Column 7, Line 88 and subsets from CMS 2552-10; and

(VIII) "Other Non-Hospital Component Charges" from Worksheet G-2, Lines 6, 8, 21, 21.02, 23, and 24 from CMS 2552-96, or Worksheet G-2, Lines 5, 7, 9, 21, 24, 26, and 27 from CMS 2552-10;

B. Obtain "Net Revenue" from Worksheet G-3, Line 3, Column 1. The state will ensure this amount is net of bad debts and other uncollectible charges by survey methodology;

C. "Adjusted Gross Total Charges" (the result of the computations in subparagraph (1)(A)13.A.) will then be further adjusted by a hospital-specific collection-to-charge ratio determined as follows:

(I) Divide "Net Revenue" by "Gross Total Charges"; and

(II) "Adjusted Gross Total Charges" will be multiplied by the result of part (1)(A)13.C.(I) to yield "Adjusted Net Revenue";

D. Obtain "Gross Inpatient Charges" from Worksheet G-2, Line 25, Column 1 from CMS 2552-96, or Worksheet G-2, Line 28, Column 1 from CMS 2552-10, of the most recent cost report that is available for a hospital;

E. Obtain "Gross Outpatient Charges" from Worksheet G-2, Line 25, Column 2 from CMS 2552-96, or Worksheet G-2, Line 28, Column 2 from CMS 2552-10, of the most recent cost report that is available for a hospital;

F. Total "Adjusted Net Revenue" will be allocated between "Net Inpatient Revenue" and "Net Outpatient Revenue" as follows:

(I) "Gross Inpatient Charges" will be divided by "Gross Total Charges";

(II) "Adjusted Net Revenue" will then be multiplied by the result to yield "Net Inpatient Revenue"; and

(III) The remainder will be allocated to "Net Outpatient Revenue"; and

G. The trend indices listed below will be applied to the apportioned inpatient adjusted net revenue and outpatient adjusted net revenue in order to inflate or trend forward the adjusted net revenues from the FRA fiscal year cost report to the current state fiscal year to determine the inpatient and outpatient adjusted net revenues sub-

ject to the FRA assessment.

(I) SFY 2009 = 5.50%

(II) SFY 2009 Missouri Specific Trend = 1.50%

(III) SFY 2010 = 3.90%

(IV) SFY 2010 Missouri Specific Trend = 1.50%

(V) SFY 2011 = 3.20%

(VI) SFY 2012 = 5.33%

(VII) SFY 2013 = 4.4%

(VIII) SFY 2014 =

(a) Inpatient Adjusted Net Revenues—0%

(b) Outpatient Adjusted Net Revenues—3.70%

(IX) SFY 2015 =

(a) Inpatient Adjusted Net Revenues—0%

(b) Outpatient Adjusted Net Revenues—4.30%

(X) SFY 2016 =

(a) Inpatient Adjusted Net Revenues—0%

(b) Outpatient Adjusted Net Revenues—3.90%

(XI) SFY 2017 =

(a) Inpatient Adjusted Net Revenues—0%

(b) Outpatient Adjusted Net Revenues—4.10%

(XII) SFY 2018 =

(a) Inpatient Adjusted Net Revenues—0%

(b) Outpatient Adjusted Net Revenues—0%

(XIII) SFY 2019 =

(a) Inpatient Adjusted Net Revenues—0%

(b) Outpatient Adjusted Net Revenues—0%

14. Net operating revenue—Gross charges less bad debts, less charity care, and less contractual allowances times the trend indices listed in 13 CSR 70-15.010(3)(B).

15. Other operating revenues—The other operating revenue is total other revenue less government appropriations, less donations, and less income from investments times the trend indices listed in 13 CSR 70-15.010(3)(B).

(22) Beginning July 1, 2018, the FRA assessment shall be determined at the rate of five and sixty hundredths percent (5.60%) of each hospital's inpatient adjusted net revenues and outpatient adjusted net revenues as set forth in paragraph (1)(A)13. The FRA assessment rate of five and sixty hundredths percent (5.60%) will be applied individually to the hospital's inpatient adjusted net revenues and outpatient adjusted net revenues. The hospital's total FRA assessment is the sum of the assessment determined from its inpatient adjusted net revenue plus the assessment determined for its outpatient adjusted net revenue.

AUTHORITY: sections 208.201, 208.453, [and] 208.455, and 660.017, RSMo 2016. Emergency rule filed Sept. 21, 1992, effective Oct. 1, 1992, expired Jan. 28, 1993. Emergency rule filed Jan. 15, 1993, effective Jan. 25, 1993, expired May 24, 1993. Original rule filed Sept. 21, 1992, effective June 7, 1993. For intervening history, please consult the Code of State Regulations. Emergency amendment filed June 21, 2018, effective July 1, 2018, expires Feb. 28, 2019. A proposed amendment covering this same material is published in this issue of the Missouri Register.

The Secretary of State shall publish all executive orders beginning January 1, 2003, pursuant to section 536.035.2, RSMo 2016.

EXECUTIVE ORDER

18-04

WHEREAS, Executive Order 17-03 was issued on January 10, 2017, by former Governor Eric R. Greitens; and

WHEREAS, Executive Order 17-03 ordered that “[n]o State Agency shall release proposed regulations for notice and comment, amend existing regulations, or adopt new regulations at any time until approved by the Office of the Governor”; and

WHEREAS, Executive Order 17-03 further ordered that “[e]very State Agency shall undertake a review of every regulation under its jurisdiction within the Code of State Regulations” and required every state agency to “take any action necessary to repeal or to cease rulemaking for any regulation” that does not meet certain criteria by June 30, 2018; and

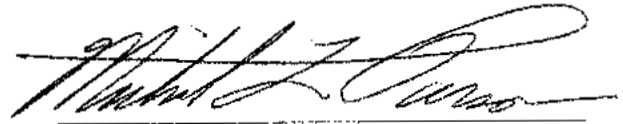
WHEREAS, in accordance with Executive Order 17-03, state agencies have submitted numerous proposed rulemakings that require the approval of the Office of the Governor, many of which are still pending; and

WHEREAS, due to the number of bills passed this year by the legislature that are set to go into effect on August 28, 2018, many state agencies may need additional time to revise and submit proposed rulemakings in order to incorporate statutory changes; and

WHEREAS, given the June 30, 2018, deadline contained in Executive Order 17-03, more time is needed for the new administration to thoroughly review the proposed rulemakings.

NOW THEREFORE, I, MICHAEL L. PARSON, GOVERNOR OF THE STATE OF MISSOURI, by virtue of the authority vested in me by the Constitution and laws of the State of Missouri, do hereby extend the June 30, 2018, deadline contained in Section 3d of Executive Order 17-03 through September 30, 2018, for the purpose of allowing the Office of the Governor to fully review such rulemakings.

IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Missouri, in the City of Jefferson, on this 29th day of June, 2018.



Michael L. Parson
Governor



John R. Ashcroft
Secretary of State

Under this heading will appear the text of proposed rules and changes. The notice of proposed rulemaking is required to contain an explanation of any new rule or any change in an existing rule and the reasons therefor. This is set out in the Purpose section with each rule. Also required is a citation to the legal authority to make rules. This appears following the text of the rule, after the word "Authority."

Entirely new rules are printed without any special symbolology under the heading of proposed rule. If an existing rule is to be amended or rescinded, it will have a heading of proposed amendment or proposed rescission. Rules which are proposed to be amended will have new matter printed in boldface type and matter to be deleted placed in brackets.

An important function of the *Missouri Register* is to solicit and encourage public participation in the rulemaking process. The law provides that for every proposed rule, amendment, or rescission there must be a notice that anyone may comment on the proposed action. This comment may take different forms.

If an agency is required by statute to hold a public hearing before making any new rules, then a Notice of Public Hearing will appear following the text of the rule. Hearing dates must be at least thirty (30) days after publication of the notice in the *Missouri Register*. If no hearing is planned or required, the agency must give a Notice to Submit Comments. This allows anyone to file statements in support of or in opposition to the proposed action with the agency within a specified time, no less than thirty (30) days after publication of the notice in the *Missouri Register*.

An agency may hold a public hearing on a rule even though not required by law to hold one. If an agency allows comments to be received following the hearing date, the close of comments date will be used as the beginning day in the ninety- (90-) day-count necessary for the filing of the order of rulemaking.

If an agency decides to hold a public hearing after planning not to, it must withdraw the earlier notice and file a new notice of proposed rulemaking and schedule a hearing for a date not less than thirty (30) days from the date of publication of the new notice.

Proposed Amendment Text Reminder:
Boldface text indicates new matter.
[Bracketed text indicates matter being deleted.]

Title 2—DEPARTMENT OF AGRICULTURE
Division 90—Weights, Measures and Consumer
Protection
Chapter 10—Liquefied Petroleum Gases

PROPOSED RESCISSION

2 CSR 90-10.016 Meters for Measurement—Specifications and Proving. This rule set out minimum general standards governing the design of meters used for measuring liquefied petroleum gas.

PURPOSE: This rule should be rescinded because rulemaking authority and powers to promulgate rules is under the Missouri Propane Safety Commission not the Missouri Department of Agriculture. The Missouri Propane Commission voted unanimously to rescind this rule on January 9, 2018, because it duplicates the current Weights, Measures and Consumer Protection law, which is in Chapter 413 RSMo, Standards of Weights and Measures.

AUTHORITY: section 323.020, RSMo Supp. 2008. Original rule filed July 13, 1977, effective Nov. 11, 1977. For intervening history, please consult the Code of State Regulations. Rescinded: Filed June 27, 2018.

PUBLIC COST: The proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: The proposed rescission will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rescission with Mr. Ronald G. Hayes, Division Director, Weights, Measures and Consumer Protection Division, PO Box 630, Jefferson City, MO 65102 or online at Agriculture.MO.Gov/proposed-rules/. To be considered, comments must be received within thirty (30) days after publication of this notice in the Missouri Register. No public hearing is scheduled.

Title 2—DEPARTMENT OF AGRICULTURE
Division 90—Weights, Measures and Consumer
Protection
Chapter 11—Anhydrous Ammonia

PROPOSED AMENDMENT

2 CSR 90-11.010 ANSI K61.1-19/81/99, Safety Requirements for the Storage and Handling of Anhydrous Ammonia. The division is deleting section (2), amending the summary and sections (1) and (3), and renumbering section (3).

PURPOSE: This proposed amendment adopts a more recent version of ANSI K61.1 and removes duplicative language.

PUBLISHER'S NOTE: The secretary of state has determined that the publication of the entire text of the material which is incorporated by reference as a portion of this rule would be unduly cumbersome or expensive. This material as incorporated by reference in this rule shall be maintained by the agency at its headquarters and shall be made available to the public for inspection and copying at no more than the actual cost of reproduction. This note applies only to the reference material. The entire text of the rule is printed here.

Summary: The American National Standards Institute (ANSI), *Safety Requirements for the Storage and Handling of Anhydrous Ammonia*, publication No. K61.1-19/81/99, is a guideline established for authorities charged with regulating the storage, transportation and handling of anhydrous ammonia. These requirements apply to the design, construction, repair, alteration, location, installation or operation of anhydrous ammonia systems including refrigerated ammonia storage systems. However, these requirements do not apply to ammonia manufacturing plants, refrigeration plants where ammonia is used solely as a refrigerant or ammonia transportation pipelines.

(1) The rule for the Division of Weights and Measures for safety requirements for anhydrous ammonia shall be those guidelines presented in the ANSI K61.1-19/81/99, entitled *Safety Requirements for the Storage and Handling of Anhydrous Ammonia*.

[(2) Should any portion of ANSI K61.1-1981 be deemed unacceptable, rules will be promulgated within this chapter denoting and excepting those portions and adopting alternative provisions as deemed necessary by the director of the

Department of Agriculture.]

[(3)](2) Cylinders and other portable containers used in anhydrous ammonia service shall be designed, fabricated, tested, constructed, marked, and placarded in accordance with the United States Department of Transportation Hazardous Materials regulations contained in 49 CFR parts 100 to 185, which are herein incorporated by reference, and approved for the storage and transportation of anhydrous ammonia. *[Cylinder and other portable container valves and other fittings, or hoses attached thereto, used in anhydrous ammonia service, shall be constructed of material resistant to anhydrous ammonia and shall not be constructed of brass, copper, silver, zinc or other material subject to attack by ammonia.]* Each cylinder utilized for the storage and transportation of anhydrous ammonia shall be labeled, in a conspicuous location, with the words "ANHYDROUS AMMONIA" or "CAUTION: ANHYDROUS AMMONIA" and the UN number 1005 (UN 1005).

AUTHORITY: section 266.355, RSMo [2000] 2016. Original rule filed Jan. 15, 1985, effective April 11, 1985. Emergency amendment filed Nov. 17, 2003, effective Nov. 27, 2003, expired May 12, 2004. Amended: Filed Nov. 17, 2003, effective May 30, 2004. Amended: Filed June 27, 2018.

PUBLIC COST: The proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: The proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Mr. Ronald G. Hayes, Division Director, Weights, Measures and Consumer Protection Division, PO Box 630, Jefferson City, MO 65102 or online at Agriculture.MO.Gov/proposed-rules/. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

**Title 2—DEPARTMENT OF AGRICULTURE
Division 90—Weights, Measures and Consumer
Protection
Chapter 20—Method of Sale for Products**

PROPOSED AMENDMENT

2 CSR 90-20.040 NIST Handbook 130, "Uniform Regulation for the Method of Sale of Commodities." The director is amending section (1) and deleting section (2).

PURPOSE: The amendment references the current NIST Handbook 130-2018 Edition and makes a non-substantive change to update division name.

(1) The rule for the Division of Weights *[and]*, Measures *and* Consumer Protection for method of sale of commodities *[shall]* incorporate by reference the section of the *NIST Handbook 130, [2006] 2018* edition, entitled "Regulation for the Method of Sale of Commodities," except for section 2.20 related to gasoline-oxygenate blends. *NIST Handbook 130, [2006] 2018* Edition, is published by the Superintendent of Documents, U.S. Government Printing Office, October 2005. A copy of this material can be *[obtained from the U.S. Government Printing Office, Stop SSPO, Washington, DC 20402-0001, Internet: <http://bookstore.gpo.gov>, Phone: (202) 512-1800, Fax: (202) 512-2104] free of charge online*

at NIST.gov or a hard copy may be purchased from the National Conference of Weights and Measures at NCWM.net. This regulation does not include any later amendments or additions to *NIST Handbook 130*.

[(2) Should any portion of the regulation of method of sale of commodities as defined in Handbook 130 be deemed unacceptable, rules will be promulgated within this chapter denoting and excepting those portions, and adopting alternative provisions as deemed necessary by the director of the Department of Agriculture.]

AUTHORITY: section 413.065, RSMo [Supp. 2005] 2016. Original rule filed May 9, 1984, effective Aug. 11, 1984. For intervening history, please consult the *Code of State Regulations*. Amended: Filed June 27, 2018.

PUBLIC COST: The proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: The proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Mr. Ronald G. Hayes, Division Director, Weights, Measures and Consumer Protection Division, PO Box 630, Jefferson City, MO 65102 or online at Agriculture.MO.Gov/proposed-rules/. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

**Title 2—DEPARTMENT OF AGRICULTURE
Division 90—Weights, Measures and Consumer
Protection
Chapter 21—Weighing and Measuring Devices**

PROPOSED AMENDMENT

2 CSR 90-21.010 Registration of [Servicemen] Servicepersons and Service Agencies. The director is amending the rule, deleting sections (1)–(13) and form, and adding new sections (1)–(5).

PURPOSE: This amendment changes the rule to be more concise and easier for Registered Servicepersons and Service Agencies to understand. It includes a reference to the national standard to provide uniformity among neighboring states.

PUBLISHER'S NOTE: The secretary of state has determined that the publication of the entire text of the material which is incorporated by reference as a portion of this rule would be unduly cumbersome or expensive. This material as incorporated by reference in this rule shall be maintained by the agency at its headquarters and shall be made available to the public for inspection and copying at no more than the actual cost of reproduction. This note applies only to the reference material. The entire text of the rule is printed here.

[(1) For identification purposes in this chapter, the Weights and Measures Division, Missouri Department of Agriculture, in this chapter shall be referred to as a publication of the division.

(2) It shall be the policy of the division to accept voluntary registration of an individual who provides acceptable evidence that s/he is fully qualified to install, service, repair or recondition a commercial weighing or measuring device; has

a thorough working knowledge of all appropriate weights and measures laws, orders and rules; and has possession of, or available for use, weights and measures standards and testing equipment appropriate in design and adequate in amount. This policy in no way shall preclude or limit the right and privilege of any qualified individual or agency not registered with the division to install, service, repair or recondition a commercial weighing or measuring device.

(3) The term registered serviceman shall be construed to mean any individual who, for hire, award, commission or any other payment of any kind, installs, services, repairs or reconditions a commercial weighing or measuring device and who voluntarily registers him/herself as such with the division.

(4) The term commercial weighing and measuring device shall be construed to include any weight or measure or weighing or measuring device commercially used or employed in establishing the size, quantity, extent, area or measurement of quantities, things, produce or articles for distribution or consumption, purchased, offered or submitted for sale, hire or award, or in computing any basic charge or payment for services rendered on the basis of weight or measure and also shall include any accessory attached to or used in connection with a commercial weighing or measuring device when that accessory is so designed or installed that its operation affects, or may affect the accuracy of the device.

(5) The division may enter into an informal reciprocity agreement with any other state or states that has or have similar voluntary registration policies. Under this agreement, the registered servicemen of the states party to the reciprocal agreement are granted full reciprocal authority, including reciprocal recognition of certification of standards and testing equipment, in all states party to the agreement. The division may issue a list of all reciprocal states.

(6) An individual may apply for voluntary registration to service weighing devices or measuring devices on an application form supplied by the division. The form, duly signed and witnessed, shall include certification by the applicant that the individual is fully qualified to install service, repair or recondition whatever devices for the service of which competence is being registered; has in possession or available for use all necessary testing equipment and standards; and has full knowledge of all appropriate weights and measures laws, orders and rules. An applicant also shall submit appropriate evidence or references as to qualifications and a test based on the NIST Handbook 44, and Missouri law will be administered by the division to further evaluate knowledge. The applicant must possess a current copy of the NIST Handbook 44.

(7) Upon receipt and acceptance of a properly executed application form, the division shall issue a Certificate of Registration, to the applicant including an assigned registration number, which shall remain effective for two (2) years from date of issue.

(8) A bearer of a Certificate of Registration shall have the authority to remove an official rejection tag or mark placed by an authorized representative of the Division of Weights and Measures on those weighing or measuring devices for which they have been certified as fully qualified to install, service, repair or recondition; place in service, until that time an official examination can be made, a weighing or measur-

ing device that has been officially rejected; and placed in service, until that time an official examination can be made, a new or used weighing or measuring device.

(9) The division shall furnish each registered serviceman with a supply of report forms to be known as Placing in Service Reports. These forms shall be executed in triplicate, shall include the assigned registration number and shall be signed by a registered serviceman for each rejected device restored to service and for each newly installed device placed in service. Within twenty-four (24) hours after a device is restored to service or placed in service, the original of the properly executed Placing in Service Report, a copy of the test report and the rejection tag shall be mailed to the Weights and Measures Division, Missouri Department of Agriculture, P.O. Box 630, Jefferson City, MO 65102. The duplicate copy of the report shall be handed to the owner or operator of the devices and the triplicate copy of the report shall be retained by the registered serviceman.

(10) A registered serviceman shall submit, at least biennially to the division, for examination and certification, any standards and testing equipment that are used or are to be used in the performance of the service and testing functions with respect to weighing and measuring devices for which competence is registered. In servicing commercial weighing or measuring devices, a registered serviceman shall not use any standards or testing equipment that have not been certified by the division. Testing of standards may be waived by the director if proof of calibration is supplied from a reciprocal state or a NIST/National Voluntary Laboratory Accreditation Program (NVLAP)-approved industry laboratory.

(11) The division, for good cause, after careful consideration and investigation, may suspend or revoke a Certificate of Registration.

(12) The division shall publish from time-to-time as deemed appropriate, and may supply upon request, a list of registered servicemen.

(13) If any provision of these rules is declared invalid, the validity of the remainder of these rules shall not be affected.]

(1) The rule for the Division of Weights, Measures and Consumer Protection for Voluntary Registration of Servicepersons and Service Agencies for Commercial Weighing and Measuring Devices shall incorporate by reference the section of the 2018 edition of NIST Handbook 130, entitled "Uniform Regulation for the Voluntary Registration of Servicepersons and Service Agencies for Commercial Weighing and Measuring Devices".

(2) Registration Fee. There is no registration fee for Servicepersons and Registered Service Agencies.

(3) Placed in Service Report. Within twenty-four (24) hours after a device is restored to service or placed in service, the original of the properly executed Placed in Service Report, together with any official rejection tag removed from the device, shall be forwarded to MDA – Weights, Measures and Consumer Protection Division, PO Box 630, Jefferson City, MO 65102-0630 or faxed to 573-751-0281.

(4) Certificate of Registration Exception. The "Certificate of Registration" will expire two (2) years from the date of issuance.

(5) NIST Handbook 130, 2018 Edition, is published by the

Superintendent of Documents, U.S. Government Printing Office, and is available free of charge online at NIST.gov or a hard copy may be purchased from the National Conference on Weights and Measures at NCWM.net.

AUTHORITY: section 413.065, RSMo [1994] 2016. Original rule filed Dec. 30, 1975, effective Jan. 9, 1976. For intervening history, please consult the *Code of State Regulations*. Amended: Filed June 27, 2018.

PUBLIC COST: The proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: The proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Mr. Ronald G. Hayes, Division Director, Weights, Measures and Consumer Protection Division, PO Box 630, Jefferson City, MO 65102 or online at Agriculture.MO.Gov/proposed-rules/. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

Title 2—DEPARTMENT OF AGRICULTURE
Division 90—Weights, Measures and Consumer
Protection
Chapter 22—Packaging and Labeling

PROPOSED AMENDMENT

2 CSR 90-22.140 NIST Handbook 130, “Uniform Packaging and Labeling Regulation.” The director is amending section (1) and deleting section (2).

PURPOSE: The amendment references the current NIST Handbook 130-2018 Edition and makes a non-substantive change to update division name.

(1) The rule for the Division of Weights [and], Measures and Consumer Protection for packaging and labeling shall incorporate by reference the section of the [2006] 2018 edition of NIST Handbook 130, entitled “Uniform Packaging and Labeling Regulation.” NIST Handbook 130, [2006] 2018 Edition, is published by the Superintendent of Documents, U.S. Government Printing Office[, October 2005]. A copy of this material can be obtained [from the U.S. Government Printing Office, Stop SSPO, Washington, DC 20402-0001, Internet: <http://bookstore.gpo.gov>, Phone (202) 512-1800, Fax: (202) 512-2104] free of charge online at NIST.gov or a hard copy may be purchased from the National Conference of Weights and Measures at NCWM.net. This regulation does not include any later amendments or additions to NIST Handbook 130.

[(2) Should any portion of the packaging and labeling regulation be deemed unacceptable, rules will be promulgated within this chapter denoting and excepting those portions and adopting alternative provisions as deemed necessary by the director of the Department of Agriculture.]

AUTHORITY: section 413.065, RSMo [Supp. 2005] 2016. Original rule filed May 9, 1984, effective Sept. 14, 1984. For intervening history, please consult the *Code of State Regulations*. Amended: Filed June 27, 2018.

PUBLIC COST: The proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: The proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Mr. Ronald G. Hayes, Division Director, Weights, Measures and Consumer Protection Division, PO Box 630, Jefferson City, MO 65102 or online at Agriculture.MO.Gov/proposed-rules/. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

Title 2—DEPARTMENT OF AGRICULTURE
Division 90—Weights, Measures and Consumer
Protection
Chapter 23—Inspection of Packaged Commodities

PROPOSED AMENDMENT

2 CSR 90-23.010 NIST Handbook 133, Technical Procedures and Methods for Measuring and Inspecting Packages or Amounts of Commodities. The director is amending section (1) and deleting section (2).

PURPOSE: The amendments to this rule are to reference the current NIST Handbook 133-2018 Edition and makes a non-substantive change to update division name.

(1) The technical procedures and methods used by the Division of Weights [and], Measures and Consumer Protection for measuring and inspecting packages or amounts of commodities kept, offered, exposed for sale, sold or in the process of delivery, shall be those procedures and methods described and specified in the *National Institute of Standards and Technology (NIST) Handbook 133, Checking the Net Contents of Packaged Goods, [Fourth Edition (January 2005)] 2018 Edition*, as incorporated by reference in this rule. NIST Handbook 133, [2005] 2018 Edition, is published by the Superintendent of Documents, U.S. Government Printing Office[, December 2004]. A copy of this material can be obtained [from the U.S. Government Printing Office, Stop SSPO, Washington, DC 20402-0001, Internet: <http://bookstore.gpo.gov>, Phone: (202) 512-1800, Fax: (202) 512-2104] free of charge online at NIST.gov or a hard copy may be purchased from the National Conference of Weights and Measures at NCWM.net. This regulation does not include any later amendments or additions to NIST Handbook 133.

[(2) The director of the Department of Agriculture or a designated subordinate shall amend this rule as each new addition, amendment or revision of Handbook 133 is published and becomes available. Should any portion of Handbook 133 be deemed unacceptable, rules will be promulgated within this chapter denoting and excepting those portions and adopting alternative provisions as deemed necessary by the director of the Department of Agriculture.]

AUTHORITY: section 413.065, RSMo [Supp. 2005] 2016. Original rule filed Sept. 14, 1981, effective Dec. 15, 1981. Amended: Filed Sept. 12, 2002, effective March 30, 2003. Amended: Filed Dec. 15, 2005, effective June 30, 2006. Amended: Filed June 27, 2018.

PUBLIC COST: The proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: The proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Mr. Ronald G. Hayes, Division Director, Weights, Measures and Consumer Protection Division, PO Box 630, Jefferson City, MO 65102 or online at Agriculture.MO.Gov/proposed-rules/. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

Title 2—DEPARTMENT OF AGRICULTURE
Division 90—Weights, Measures and Consumer
Protection
Chapter 25—Price Verification

PROPOSED AMENDMENT

2 CSR 90-25.010 Price Verification Procedures. The director is amending section (1) and deleting section (2).

PURPOSE: This rule is amended to reference the current NIST Handbook 130-2018 Edition and makes a non-substantive change to update division name.

(1) The Division of Weights [and], Measures and Consumer Protection shall follow the examination procedure for price verification incorporated by reference in the section of NIST Handbook 130, [2006] 2018 edition, entitled "Examination Procedure for Price Verification." NIST Handbook 130, [2006] 2018 Edition, is published by the Superintendent of Documents, U.S. Government Printing Office[, October 2005]. A copy of this material can be obtained [from the U.S. Government Printing Office, Stop SSPO, Washington, DC 20402-0001], Internet: <http://bookstore.gpo.gov>, Phone (202) 512-1800, Fax: (202) 512-2104] free of charge online at NIST.gov or a hard copy may be purchased from the National Conference on Weights and Measures at NCWM.net. This regulation does not include any later amendments or additions to NIST Handbook 130.

[(2) Should any portion of the examination procedure for price verification as defined in NIST Handbook 130 be deemed unacceptable, rules will be promulgated within this chapter denoting and excepting those portions, and adopting alternative procedures as deemed necessary by the director of the Department of Agriculture.]

AUTHORITY: section 413.065, RSMo [Supp. 2005] 2016. Original rule filed Aug. 13, 1996, effective Feb. 28, 1997. For intervening history, please consult the *Code of State Regulations*. Amended: Filed June 27, 2018.

PUBLIC COST: The proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: The proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Mr. Ronald G. Hayes, Division Director, Weights, Measures and Consumer Protection Division, PO Box 630, Jefferson City, MO 65102 or online at Agriculture.MO.Gov/proposed-rules/. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

Title 2—DEPARTMENT OF AGRICULTURE
Division 90—Weights, Measures and Consumer
Protection
Chapter 30—Petroleum Inspection

PROPOSED AMENDMENT

2 CSR 90-30.050 Inspection of Premises. The director proposes to delete sections (7)–(11), (15), (17), (21), and (25) and amend and renumber remaining sections.

PURPOSE: This rule is amended to remove obsolete or redundant language already in the NFPA 30 and 30-A and make non-substantial changes to the division name.

[(7) All storage containers, valves, piping, pumps and associated equipment shall be kept free of leaks.

(8) Each storage container shall have the product it contains identified clearly and conspicuously on the container.

(9) All electrical equipment shall comply with NFPA Manual No. 70 entitled National Electrical Code, 1996 Edition.

(10) Each loading and unloading connection to petroleum storage shall be identified with the petroleum product for which it is to be used.

(11) All tanks storing products regulated by Chapter 414, RSMo shall meet the requirements of NFPA Manual No. 30 entitled Flammable and Combustible Liquids Code, 1996 Edition.]

[(12)](7) The fencing requirement contained in sections 2-1.3 and 2-4.7.1 of the 1996 Edition of NFPA Manual No. 30A shall not apply.

[(13)](8) Section 2-4.2.1 contained in the 1996 Edition of the NFPA Manual No. 30A may be amended by the director if justification for the need is provided in writing and the level of safety to public and property will not be diminished.

[(14)](9) After the effective date of this rule, the provisions of section 2-4.2.2, relating to aboveground storage tank distance requirements, contained in the 1996 Edition of NFPA Manual No. 30A shall apply only to new locations and those existing locations that—

(A) Install aboveground storage tanks in place of underground storage tanks;

(B) Remove and replace all aboveground storage tanks, piping, and dispensing devices;

(C) Replace any existing aboveground storage tanks with one of a larger capacity; and

(D) Install additional aboveground tanks.

[(15) Effective July 1, 2000, tank gauging systems incorporating external plastic sight tube gauges cannot be utilized for gauging tank volume.]

[(16)](10) All aboveground storage tanks installed and connected together, utilizing a common piping system or manifold, shall be installed with each tank top level with all other tank tops to prevent any overfilled tank condition. When tanks are manifolded or piped together, the total capacity of all tanks shall be considered as a single tank when calculating the capacity of the secondary containment facility.

[(17) Aboveground storage tanks shall not be installed or stacked above any aboveground or underground storage tank.]

[(18)](11) Storage tanks of double wall construction are not acceptable for use aboveground in lieu of secondary containment by diking or remote impounding unless the tanks meet the requirements of NFPA 30A, 1996 Edition, section 2-4.5, and are equipped with automatic tank gauging, overfill protection and interstitial monitoring. Section 2-3.4.1, exception (2), contained in the 1996 Edition of NFPA 30 shall not apply.

[(19)](12) Aboveground storage tanks shall not be installed under any electrical lines or transformers. All aboveground storage tanks shall maintain a minimum horizontal distance of ten feet (10') from any overhead power line or transformer.

[(20)](13) All aboveground storage tanks utilizing compartments and storing different classes of products shall be constructed with a double wall center bulkhead with means of interstitial monitoring. This may be accomplished using an interstitial drain which must be kept closed at all times except for draining condensate or checking for leakage or failure of the bulkhead. Any liquid that is drained from the interstitial space, may be considered a hazardous waste, and must be disposed of in a manner that is in compliance with the Department of Natural Resources regulations pertaining to such liquids.

[(21)] Any aboveground storage tank utilizing riveted construction, that has been determined by inspection, by the Department of Agriculture, to have extensive corrosion of the tank shell or seepage or leakage from any portion of the tank shell or tank seams, shall be removed from service and disposed of in a safe manner. All other aboveground storage tanks utilizing riveted construction shall be removed from service on or before December 31, 2005, and disposed of in a manner that is safe to public, property and the environment.]

[(22)](14) The practice of switching the use of a storage tank from heating oil or kerosene to gasoline and from gasoline to heating oil or kerosene is prohibited (i.e., racing fuel to kerosene). Tank use is limited to a single product.

[(23)](15) Tanks storing different classes of petroleum products (i.e., gasoline a class I or kerosene and diesel fuel a class II) shall not be piped or connected together.

[(24)](16) Aboveground storage tanks that are not being used, and have been out of service for six (6) months or more, shall be emptied, cleaned of product and shall be removed from the secondary containment facilities.

[(25)] Tanks manufactured for transportation purposes, such as tank wagon and transport tanks, shall not be utilized for fixed storage of products regulated by Chapter 414, RSMo. (Note: Tanks manufactured for underground use are also prohibited for above-ground storage tank use.)]

[(26)](17) Aboveground storage tanks storing alcohols, fuel blending components or additives for motor fuels shall meet the requirements as contained in the NFPA Manuals 30 and 30A, 1996 Editions and the requirements contained in 2 CSR 90-30.050.

[(27)](18) Each aboveground storage tank shall meet the requirements of the 1996 Edition of NFPA 30A, section 2-4.6.1. An exception may be made for the ninety-five percent (95%) stop-fill requirement if the owner and/or operator of the tank can demonstrate there is adequate protection for the tank to prevent an overfill situation from occurring. Tanks of two thousand (2,000) gallons capacity or less, that are filled from fuel delivery vehicles by hose nozzle, and utilize a manual gaging method, such as a gage stick to determine the tank outage and volume of liquid that can be safely delivered into the tank, are exempt from the requirements of NFPA 30A, section 2-

4.6.1. If this method is utilized, the delivery truck operator/driver shall be in attendance and manually operate the delivery nozzle throughout the entire delivery process to insure the tank is not over-filled.

[(28)](19) All piping, including fiberglass and other non-metallic piping, constructed of low melting point materials shall be installed in conformance with manufacturers instructions. All piping, including fiberglass and other non-metallic piping, constructed of low melting point materials in dispensing devices or open pits or sumps beneath the dispensing device shall be protected from fire exposure. Protection shall be provided by December 31, 2005 by a method that is approved by the director of the Department of Agriculture.

[(29)](20) The walls and floor of secondary containment structures shall be constructed of earth, steel, concrete, or solid masonry that is compatible with the specifications of the product being stored, that is liquid tight and have the ability to contain any released product until corrective action, such as the removal of released product and subsequent cleanup including soil and groundwater, can occur. Cleanup of any released product and contaminated soil, groundwater, etc., shall be in conformance with the Department of Natural Resources environmental regulations. The walls and floor of the containment structure shall be designed to support the gravity load of the storage containers and the hydrostatic loads resulting from a release within the secondary containment structure. Gravel, rock, or open cell block structures are not considered to be liquid tight and cannot be used.

[(30)](21) The drains in all secondary containment facilities shall remain closed at all times except when accumulated water or released/spilled product is being removed. Water or product shall not be allowed to accumulate within any secondary containment facility, this includes dikes and remote impoundments. Accumulated water and/or product within a secondary containment facility shall be removed and disposed of in manner that is in compliance with applicable rules of the Department of Natural Resources.

[(31)](22) Storage of products other than petroleum products regulated by Chapter 414, RSMo, except waste oil storage or heating oil for owners use, within a secondary containment facility is prohibited. Any waste oil or heating oil storage tank(s) located within a facility containing regulated products shall meet all of the requirements of regulated product storage tanks. Chemicals and fertilizers shall not be stored within the secondary containment facility.

[(32)](23) Walls of buildings or other structures cannot be utilized as a wall or common wall for any secondary containment facility.

[(33)](24) All remote pumping and pressurized piping systems, including aboveground storage tanks systems that produce a gravity head on the dispensing device and piping system, shall be equipped with a listed leak detection device or approved leak detection method that will provide an indication if the dispensing and piping system is not liquid tight. Leak detection may be accomplished by, but not limited to, one (1) or a combination of the following methods:

(A) Installation of an approved listed automatic line leak detector. The leak detector is to be tested at least once annually to insure its proper operation or at such time a problem with the detector is indicated. This also includes an annual pressure test performed on all piping;

(B) Annual pressure testing of the dispensing and piping system, provide and maintain an accurate inventory and reconciliation of all gallons of product received, gallons sold, and gallons currently on hand; and

(C) Other method(s) approved by the director.

[(34)](25) In order to prevent product loss, all locations utilized for the sale of products regulated by Chapter 414, RSMo shall provide

and maintain accurate inventory records of all gallons of product received, gallons sold and gallons currently on hand. Such records shall be made available to the director of agriculture or his/her delegated representative within forty-eight (48) hours of request.

[(35)](26) All persons installing, repairing or servicing appliances, equipment or devices including storage tanks and piping located at any facility utilized for the sale of products regulated by Chapter 414, RSMo, shall be properly trained and experienced in the work, familiar with all safety precautions and shall install, repair, and service all appliances, equipment, and devices including storage tanks and piping in conformance with all of the requirements of Chapter 414, RSMo and the petroleum inspection rules.

[(36)](27) No person shall install, repair, or service any dispensing device without first having registered with the Department of Agriculture, Petroleum Inspection Program, submitting documentation of properly designed and calibrated testing equipment and proof of training and experience to perform such work. Registration may be revoked if such person does not obtain and maintain testing equipment calibration at least once every two (2) years and/or installs, repairs, or services any dispensing device in violation of Chapter 414, RSMo and/or any rules promulgated thereunder.

[(37)](28) Installation of equipment and devices, such as vending machines and ATMs, that may produce safety hazards by distracting the customer from the dispensing operation, limit ingress and egress to the dispensing area or from electrical components of the equipment or device, or limit visibility to vehicle refueling on islands utilized for the dispensing of petroleum products regulated by Chapter 414, RSMo is prohibited.

AUTHORITY: section 414.142, RSMo [2000] 2016. This rule was previously filed as 2 CSR 90-30.010. Emergency rule filed Dec. 1, 1987, effective Jan. 1, 1988, expired March 1, 1988. Original rule filed Oct. 16, 1987, effective Feb. 11, 1988. For intervening history, please consult the *Code of State Regulations*. Amended: Filed June 27, 2018.

PUBLIC COST: The proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: The proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Mr. Ronald G. Hayes, Division Director, Weights, Measures and Consumer Protection Division, PO Box 630, Jefferson City, MO 65102 or online at Agriculture.MO.Gov/proposed-rules/. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

**Title 2—DEPARTMENT OF AGRICULTURE
Division 90—Weights, Measures and Consumer
Protection
Chapter 30—Petroleum Inspection**

PROPOSED AMENDMENT

2 CSR 90-30.070 Unattended Self-Service Stations. The director is deleting sections (10)–(15) to include all subsections.

PURPOSE: The proposed amendments remove obsolete or redundant language already found in the NFPA 30-A (National Fire Code).

[(10)] The owner or operator of each unattended self-service station, upon reasonable request, shall make available person(s) and keys or cards, necessary to inspect and test all measuring devices.

(11) A container or storage shall be provided by the owner or operator of each device for the storage of the fuel dispensed during the device test. The container or storage shall comply with the requirements of NFPA Manual No. 30 entitled *Flammable and Combustible Liquids Code*, 1996 Edition.

(12) Dispensing devices, remote pumps and hose nozzle valves must comply with 2 CSR 90-30.080 and the following rules:

(A) Hose nozzles must meet the standards of UL and—

1. Nozzles must be equipped with devices designed to retain the nozzle spout in the vehicle fill pipe while refueling (for example, spout anchor spring). These devices must be in compliance with UL or Factory Mutual (FM). The spout anchor spring shall be of the type recommended by the manufacturer of the hose nozzle valve and installed and maintained in accordance with manufacturer's recommendations;

2. A listed automatic self-closing type nozzle with a latch-open device must be installed as an integral part of the nozzle assembly with exception of marine installations which shall not have latch-open devices;

3. Hose nozzle valves shall be of the type which will close automatically, independent of the latch-open device, upon loss of pressure in the dispensing system and in which the latch-open device may only be engaged when the dispensing system is under pressure; and

4. The nozzle must be designed and maintained to cease the flow of product if the nozzle falls from the fill pipe of the motor vehicle being fueled.

(13) Remote pumps serving dispensing devices shall meet the standards of UL and the requirements contained in 2 CSR 90-30.050 (33).

(14) Dispensing devices shall meet the standards of UL and the following rules:

(A) Dispensing devices served by remote pumps shall be equipped with an emergency shut-off valve meeting the standards of UL and which shall comply with 4-3.6 of NFPA Manual No. 30A, 1996 Edition;

(B) Dispensing devices shall be bolted to their mounting surface in accordance with the manufacturer's instructions;

(C) Dispensing devices shall be mounted or protected against collision damage by means of islands, posts or an equivalent means;

(D) Dispensing devices shall be wired in accordance with Chapter 5 of NFPA Manual No. 70, 1996 Edition which is incorporated herein by reference and shall be installed and maintained in accordance with the manufacturer's recommendations; and

(E) An emergency breakaway device shall be installed on each hose at all dispensing devices available for self-service of Class I, II and III liquids. The breakaway device shall be designed to retain liquid on both sides of the breakaway point and shall be installed and maintained in accordance with the manufacturer's recommendations.

(15) Emergency electrical controls shall be provided and shall comply with the following rules:

(A) A master electrical shut-off switch or circuit breaker shall be provided at a location not less than twenty feet (20') from the nearest, nor more than one hundred feet (100') from the farthest dispensing device for unattended self-service and

shall—

1. Be visible from all unattended self-service dispensing device locations on the premises. If installation of a single switch or circuit breaker does not achieve compliance with the requirement, duplicate switches or circuit breakers shall be required;

2. Terminate electric power to all dispensers, pumps and dispenser control devices on the premises, including neutral conductors and low voltage control wiring; and

3. Be of such a type, or installed in such a way, that it may only be reset manually with a key which shall be kept in custody of the unattended service station owner or employee of the owner or, alternatively, the resetting device shall be kept in a secured area accessible only by key or other device which is kept solely in the custody of the owner or employee of the owner (Club members, card holders and other persons utilizing the station may not have access to the mechanism necessary for resetting of the master electrical controls.);

(B) In addition to the master electrical shut-off required in subsection (15)(A), additional emergency electrical controls shall be provided at each group of dispensers or pumps served by a single dispenser control device. These additional controls, at the option of the owner, may be an integral part of the dispenser control device assembly. The device, when activated, shall terminate all electrical power to all dispensing devices or pumps which are served by that dispenser control device. Stations with only one (1) island may elect to utilize only a master electrical control located at the dispenser control device meeting the requirements of subsection (15)(A);

(C) The emergency electrical controls required by this section at all times shall be identified by a sign constructed of all weather material which shall state in letters not less than one inch (1") in height, EMERGENCY SHUT-OFF SWITCH. Letters shall contrast with the background material of the sign. The sign shall be mounted in place with the bottom of the sign not less than five feet (5') above ground;

(D) Resetting the master electrical shut-off required by this section shall be accomplished only after the condition which caused it to be activated has been corrected; and

(E) Power for illumination of dispensing areas required by this section shall not be affected by activation of any of the emergency electrical controls.]

AUTHORITY: section 414.142, RSMo [Supp. 1998] 2016. Emergency rule filed Dec. 1, 1987, effective Jan. 1, 1988, expired March 1, 1988. Original rule filed Oct. 16, 1987, effective Feb. 11, 1988. For intervening history, please consult the *Code of State Regulations*. Amended: Filed June 27, 2018.

PUBLIC COST: The proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: The proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Mr. Ronald G. Hayes, Division Director, Weights, Measures and Consumer Protection Division, PO Box 630, Jefferson City, MO 65102 or online at Agriculture.MO.Gov/proposed-rules/. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

**Title 2—DEPARTMENT OF AGRICULTURE
Division 90—Weights, Measures and Consumer
Protection
Chapter 30—Petroleum Inspection**

PROPOSED AMENDMENT

2 CSR 90-30.080 Measuring Devices. The director is deleting section (8)–(15) and (17)–(18) and renumbering remaining sections.

PURPOSE: This amendment removes sections which are obsolete or redundant of NIST Handbook 44, NFPA 30 & 30-A or NEC 70.

[(8) Each retail measuring device shall display unit price and product identity on the face of the device as required in 2 CSR 90-30.040 and the current edition of NIST Handbook 44.

(9) A container or storage shall be provided by the owner or operator of the device for storage of the fuel dispensed during the device test. The container or storage must comply with the requirements of NFPA Manual No. 30, 1996 Edition which is incorporated herein by reference.

(10) Each measuring device dispensing products regulated by Chapter 414, RSMo shall be free of leaks; the dispensing hose shall be in a condition as to prevent a hazard of leaking or bursting; and electrical wiring shall meet requirements as contained in NFPA Manual No. 70, 1996 Edition which is incorporated herein by reference.

(11) Each measuring device shall be equipped with an effective vapor eliminator or other means automatic in operation to prevent the passage of vapor and air through the meter. Vent lines from the air or vapor eliminator shall be made of metal or some similar other suitable rigid material.

(12) Size of Nozzle Spout for Dispensing Motor Fuels. Each dispensing device from which gasoline or other motor fuel that contains lead or phosphorus is sold shall be equipped with a nozzle spout having a terminal end with an outside diameter of not less than ninety-three hundredths inch (0.93") (two and three hundred sixty-two thousandths centimeters (2.362 cm)). A gasoline or other motor fuel is considered to contain lead or phosphorus if it contains more than five hundredths (0.05) grams lead per United States gallon (thirteen thousandths (0.013) grams lead per liter) or more than five thousandths (0.005) grams phosphorus per United States gallon (thirteen ten thousandths (0.0013) per liter).

(13) Any measuring device that does not meet the requirements of this rule shall be ordered corrected, discontinued or removed.

(14) No person shall hinder or obstruct the director or his/her delegated representative in the reasonable performance of his/her duties.

(15) No person shall break, tamper with, reproduce, remove or deface any official state seal, decal, tag, lock, label, form or equipment.]

[(16)](8) If the design, construction, or location of any device is such as to require a testing procedure involving special equipment or accessories or an abnormal amount of labor, the equipment, accessories and labor shall be supplied by the owner or operator of the device as required by the weights [and], measures and consumer

protection official.

[(17)] A listed rigidly anchored emergency shut-off valve (fire-impact) incorporating a fusible link or other thermally actuated device designed to close automatically in the event of severe impact or fire exposure shall be installed in accordance with the manufacturer's instructions in the supply line at the base of each island-type pump or dispenser or at the inlet of each overhead dispensing device. An emergency shut-off valve incorporating a slip joint feature shall not be used.

(18) Each hose nozzle at automotive service stations shall be equipped with a device, such as a spout anchor spring, designed to retain the nozzle spout in the vehicle fuel tank inlet while refueling.]

AUTHORITY: section 414.142, RSMo [Supp. 1998] 2016. This rule was previously filed as 2 CSR 90-30.020. Emergency rule filed Dec. 1, 1987, effective Jan. 1, 1988, expired March 1, 1988. Original rule filed Oct. 16, 1987, effective Feb. 11, 1988. For intervening history, please consult the *Code of State Regulations*. Amended: Filed June 27, 2018.

PUBLIC COST: The proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: The proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Mr. Ronald G. Hayes, Division Director, Weights, Measures and Consumer Protection Division, PO Box 630, Jefferson City, MO 65102 or online at Agriculture.MO.Gov/proposed-rules/. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

**Title 2—DEPARTMENT OF AGRICULTURE
Division 90—Weights, Measures and Consumer
Protection
Chapter 30—Petroleum Inspection**

PROPOSED AMENDMENT

2 CSR 90-30.090 Tank Trucks and Tank Wagons. The director is deleting subsection (1)(C) and relettering remaining subsections.

PURPOSE: This rule is amended to delete redundant language found in the *NIST Handbook 44*.

(1) Measuring Devices.

[(C)] Each measuring device shall be equipped with an effective and operating vapor eliminator to prevent the passage of vapor and air through the device. Vent lines from the vapor eliminator shall be made of metal or similar rigid material.]

[(D)](C) No means shall be provided by which any measured liquid can be diverted from the measuring chamber of the meter or its discharge line.

[(E)](D) The director of the Department of Agriculture or his/her delegated representative at least once each year shall test and inspect the measuring devices on tank trucks and tank wagons used in the retail or wholesale dispensing of products regulated by Chapter 414, RSMo.

[(F)](E) No meter which has been condemned shall be used for commercial purposes. All condemned meters shall be conspicuously marked **INACCURATE: USE PROHIBITED**.

[(G)](F) Each measuring device shall be sealed with an official state security seal to be applied by the director of the Department of Agriculture or his/her delegated representative.

[(H)](G) No person, except the director or his/her delegated representative, shall duplicate the state seal of Missouri to be used for sealing or applying seals to any measuring device dispensing products regulated by Chapter 414, RSMo.

[(I)](H) No person shall break or tamper with any official state security seal without the consent of the director of the Department of Agriculture or his/her delegated representative except for the repair or replacement of this device, at which time notification is to be given to the director within five (5) days.

[(J)](I) No person shall hinder or obstruct the director or his/her delegated representative in the reasonable performance of his/her duties.

[(K)](J) If the design, construction, or location of any device is such as to require a testing procedure involving special equipment or accessories, or an abnormal amount of labor, the equipment, accessories, and labor shall be supplied by the owner or operator of the device as required by the weights *[and]*, measures **and** consumer protection official.

AUTHORITY: section 414.142, RSMo [Supp. 1998] 2016. Emergency rule filed Dec. 1, 1987, effective Jan. 1, 1988, expired March 1, 1988. Original rule filed Oct. 16, 1987, effective Feb. 11, 1988. For intervening history, please consult the *Code of State Regulations*. Amended: Filed June 27, 2018.

PUBLIC COST: The proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: The proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Mr. Ronald G. Hayes, Division Director, Weights, Measures and Consumer Protection Division, PO Box 630, Jefferson City, MO 65102 or online at Agriculture.MO.Gov/proposed-rules/. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

**Title 2—DEPARTMENT OF AGRICULTURE
Division 90—Weights, Measures and Consumer
Protection
Chapter 30—Petroleum Inspection**

PROPOSED AMENDMENT

2 CSR 90-30.100 Terminals. The director is deleting subsections (1)(B)–(C) and section (2), relettering remaining subsections, and amending subsection (1)(F).

PURPOSE: This proposed rule is being amended to delete duplicated language in *NIST Handbook 44*, *NFPA 30*, and rule 2 CSR 90-30.050 (*Inspection of Premises*).

(1) Safety.

[(B)] Existing plants, storage, storage equipment, buildings, structures and installations for the sale, storage, handling or use of flammable or combustible liquids at any location which is not in strict compliance with the terms of this code

may be continued in use, provided these do not constitute a distinct hazard to life or property. When the director determines that continued use will constitute a distinct hazard to life or property, s/he shall notify the owner or operator and specify reason in writing and shall order the correction, discontinuance or removal of same.

(C) New construction and new installations or major modifications made to any terminal location shall be in conformity with the provisions of the 1996 Edition of NFPA Manual No. 30.]

[(D)](B) At least once every six (6) months the director shall inspect and examine all terminal premises utilized for the sale or storage of petroleum products regulated by Chapter 414, RSMo to insure compliance with NFPA Manual No. 30, 1996 Edition.

[(E)](C) The director or his/her delegated representative shall have free access, at reasonable times, to any terminal location utilized for the sale or storage of petroleum products regulated by Chapter 414, RSMo.

[(F)](D) No person shall hinder or obstruct the director or his/her delegated representative in the reasonable performance of his/her duties. Any measuring device which does not meet the requirements contained in the current edition of NIST Handbook 44 shall not be used and shall be ordered corrected, discontinued from use, or removed.

[(2) Measuring Devices.

(A) Each measuring device used in the sale of petroleum products regulated by Chapter 414, RSMo shall meet the requirements contained in the current edition of NIST Handbook 44.

(B) At least every six (6) months, the director shall test and inspect each measuring device used in the sale of petroleum products regulated by Chapter 414, RSMo.

(C) Any measuring device which does not meet the requirements contained in the current edition of NIST Handbook 44 shall not be used and shall be ordered corrected, discontinued from use or removed.

(D) If the design, construction or location of any device is such as to require a testing procedure involving special equipment or accessories or an abnormal amount of labor, the equipment, accessories and labor shall be supplied by the owner or operator of the device as required by the weights and measures official.

(E) Each measuring device used in the sale of petroleum products regulated by Chapter 414, RSMo shall be sealed with an official state security seal to be applied by the director of the Department of Agriculture or his/her delegated representative.

(F) All new construction and new installations or major modifications to existing facilities shall have installed separate product return lines from measuring devices back to storage for device testing purposes.

(G) No person shall break or tamper with any official state security seal without the consent of the director of the Department of Agriculture or his/her delegated representative, except for repair or replacement of that device, at which time notification is to be given to the director within five (5) days.

(H) No person, except the director or his/her delegated representative, shall duplicate the state seal of Missouri to be used for sealing or applying seals to any measuring device regulated by Chapter 414, RSMo.

(I) No person shall hinder or obstruct the director or his/her delegated representative in the reasonable performance of his/her duties.]

AUTHORITY: section 414.142, RSMo [Supp. 1998] 2016. Emergency rule filed Dec. 1, 1987, effective Jan 1, 1988, expired

March 1, 1988. Original rule filed Oct. 16, 1987, effective Feb. 11, 1988. For intervening history, please consult the **Code of State Regulations**. Amended: Filed June 27, 2018.

PUBLIC COST: The proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: The proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Mr. Ronald G. Hayes, Division Director, Weights, Measures and Consumer Protection Division, PO Box 630, Jefferson City, MO 65102 or online at Agriculture.MO.Gov/proposed-rules/. To be considered, comments must be received within thirty (30) days after publication of this notice in the **Missouri Register**. No public hearing is scheduled.

Title 2—DEPARTMENT OF AGRICULTURE
Division 90—Weights, Measures and Consumer
Protection
Chapter 36—Egg Quality Program

PROPOSED AMENDMENT

2 CSR 90-36.010 Enforcement of Missouri Egg Laws. The director is amending language in section (1), deleting subsections (1)(B)–(H), relettering remaining subsections, and adding a new reference table to the new subsection (1)(B).

PURPOSE: The amendment to the rule is to remove unnecessary language that already referenced in the USDA grading manual.

(1) [The Department of Agriculture utilizes the following standards, grades and weight classes for inspection of shell eggs.] Shell eggs shall meet the standards as published in the United States Standards, Grades, and Weight Classes for Shell Eggs, AMS 56 (July 20, 2000 or its revision). This document is available on the internet at www.ams.usda.gov/poultry under Publications.

[(B) Terms Descriptive of Shell.

1. Clean—A shell that is free from foreign material and from stains or discolorations that are readily visible. An egg may be considered clean if it has only very small specks, stains, or cage marks, if such specks, stains, or cage marks are not of sufficient number or intensity to detract from the generally clean appearance of the egg. Eggs that show traces of processing oil on the shell are considered clean unless otherwise soiled.

2. Dirty—A shell that is unbroken and that has dirt or foreign material adhering to its surface, which has prominent stains, or moderate stains covering more than one-thirty second (1/32) of the shell surface if localized, or one-sixteenth (1/16) of the shell surface if scattered.

3. Practically Normal (AA or A Quality)—A shell that approximates the usual shape and that is sound and is free from thin spots. Ridges and rough areas that do not materially affect the shape and strength of the shell are permitted.

4. Abnormal (B Quality)—A shell that may be somewhat unusual or decidedly misshapen or faulty in soundness or strength or that may show pronounced ridges or thin spots.

(C) Terms Descriptive of the Air Cell.

1. Depth of the air cell (air space between shell membranes, normally in the large end of the egg)—The depth of the air cell is the distance from its top to its bottom when

the egg is held air cell upward.

2. *Free air cell*—An air cell that moves freely toward the uppermost point in the egg as the egg is rotated slowly.

3. *Bubbly air cell*—A ruptured air cell resulting in one (1) or more small separate air bubbles usually floating beneath the main air cell.

(D) *Terms Descriptive of the White.*

1. *Clear*—A white that is free from discolorations or from any foreign bodies floating in it. (Prominent Chalzas should not be confused with foreign bodies such as spots or blood clots.)

2. *Firm (AA Quality)*—A white that is sufficiently thick or viscous to prevent the yolk outline from being more than slightly defined or indistinctly indicated when the egg is twirled. With respect to a broken-out egg, a firm white has a Haugh unit value of seventy-two degrees Fahrenheit (72°F) or higher when measured at a temperature between forty-five degrees Fahrenheit (45°F) and sixty degrees Fahrenheit (60°F).

3. *Reasonably firm (A Quality)*—A white that is somewhat less thick or viscous than a firm white. A reasonably firm white permits the yolk to approach the shell more closely which results in a fairly well defined yolk outline when the egg is twirled. With respect to a broken-out egg, a reasonably firm white has a Haugh unit value of sixty degrees Fahrenheit (60°F) up to, but not including, seventy-two degrees Fahrenheit (72°F) when measured at a temperature between forty-five degrees Fahrenheit (45°F) and sixty degrees Fahrenheit (60°F).

4. *Weak and watery (B Quality)*—A white that is weak, thin, and generally lacking in viscosity. A weak and watery white permits the yolk to approach the shell closely, thus causing the yolk outline to appear plainly visible and dark when the egg is twirled. With respect to a broken-out egg, a weak and watery white has a Haugh unit value lower than sixty degrees Fahrenheit (60°F) when measured at a temperature between forty-five degrees Fahrenheit (45°F) and sixty degrees Fahrenheit (60°F).

5. *Blood spots or meat spots*—Small blood spots or meat spots (aggregating not more than one-eighth inch (1/8") in diameter) may be classified as B Quality. If larger, or showing diffusion of blood into the white surrounding a blood spot, the egg shall be classified as Loss. Blood spots shall not be due to germ development. They may be on the yolk or in the white. Meat spots may be blood spots which have lost their characteristic red color or tissue from the reproductive organs.

6. *Bloody white*—An egg which has blood diffused through the white. Eggs with bloody whites are classed as loss. Eggs with blood spots which show a slight diffusion into the white around the localized spot are not to be classed as bloody whites.

(E) *Terms Descriptive of the Yolk.*

1. *Outline slightly defined (AA Quality)*—A yolk outline that is indistinctly indicated and appears to blend into the surrounding white as the egg is twirled.

2. *Outline fairly well defined (A Quality)*—A yolk outline that is discernible but not clearly outlined as the egg is twirled.

3. *Outline plainly visible (B Quality)*—A yolk outline that is clearly visible as a dark shadow when the egg is twirled.

4. *Enlarged and flattened (B Quality)*—A yolk in which the yolk membranes and tissues have weakened and/or moisture has been absorbed from the white to such an extent that the yolk appears definitely enlarged and flat.

5. *Practically free from defects (AA or A Quality)*—A yolk that shows no germ development but may show other very slight defects on its surface.

6. *Serious defects (B Quality)*—A yolk that shows well developed spots or areas and other serious defects, such as olive yolks, which do not render the egg inedible.

7. *Clearly visible germ development (B Quality)*—A development of the germ spot on the yolk of a fertile egg that has progressed to a point where it is plainly visible as a definite circular area or spot with no blood in evidence.

8. *Blood due to germ development*—Blood caused by development of the germ in a fertile egg to the point where it is visible as definite lines or as a blood ring. Such an egg is classified as inedible.

(F) *Classifying Eggs by Weight and Grade.*

1. Eggs shall be classified by weight into the classes of Jumbo, Extra Large, Large, Medium, Small, and Peewee. Egg scales for accurately weighing individual eggs in ounces per dozen shall be a part of the equipment in the egg candling room.

2. Classes and weights for consumer grades for shell eggs are:

Size or weight class	Minimum net weight per dozen (ounces)	Minimum net weight 30 per dozen (pounds)	Minimum net weight for individual eggs at rate per dozen (ounces)
Jumbo	30	56	29
Extra Large	27	50 1/2	26
Large	24	45	23
Medium	21	39 1/2	20
Small	18	34	17
Peewee	15	28	--

3. *Interior egg quality specifications for these standards are based on the apparent condition of the interior contents of the egg as it is twirled before the candling light.*

4. *Inspectors will determine grades of eggs (AA, A, and B) by candling with a suitable single hole candling light.*

(G) *Grades.*

1. *U.S. Grade AA.*

A. *U.S. Consumer Grade AA (at origin) shall consist of eggs which are at least eighty-seven percent (87%) AA Quality. The maximum tolerance of thirteen percent (13%) which may be below AA Quality may consist of A or B Quality in any combination, except that within the tolerance for B Quality not more than one percent (1%) may be B Quality due to air cells over three-eighths inch (3/8"), blood spots (aggregating not more than one-eighth inch (1/8") in diameter), or serious yolk defects. Not more than five percent (5%) (seven percent (7%) for Jumbo size) Checks are permitted and not more than one-half percent (0.50%) Leakers, Dirties, or Loss (due to meat or blood spots) in any combination, except that such Loss may not exceed three-tenths percent (0.30%). Other types of Loss are not permitted.*

B. *U.S. Consumer Grade AA (destination) shall consist of eggs which are at least seventy-two percent (72%) AA Quality. The remaining tolerance of twenty-eight percent (28%) shall consist of at least ten percent (10%) A Quality and the remainder shall be B Quality, except that within the tolerance for B Quality not more than one percent (1%) may be B Quality due to air cells over three-eighths inch (3/8"), blood spots (aggregating not more than one-eighth inch (1/8") in diameter), or serious yolk defects. Not more than seven percent (7%) (nine percent (9%) for Jumbo size) Checks are permitted and not more than one percent (1%) Leakers, Dirties, or Loss (due to meat or blood spots) in any combination, except that such Loss may not exceed three-tenths*

percent (0.30%). Other types of Loss are not permitted.

2. U.S. Grade A.

A. U.S. Consumer Grade A (at origin) shall consist of eggs which are at least eighty-seven percent (87%) A Quality or better. Within the maximum tolerance of thirteen percent (13%) which may be below A Quality, not more than one percent (1%) may be B Quality due to air cells over three-eighths inch (3/8"), blood spots (aggregating not more than one-eighth inch (1/8") in diameter), or serious yolk defects. Not more than five percent (5%) (seven percent (7%) for Jumbo size) Checks are permitted and not more than one-half percent (0.50%) Leakers, Dirties, or Loss (due to meat or blood spots) in any combination, except that such Loss may not exceed three-tenths percent (0.30%). Other types of Loss are not permitted.

B. U.S. Consumer Grade A (destination) shall consist of eggs which are at least eighty-two percent (82%) A Quality or better. Within the maximum tolerance of eighteen percent (18%) which may be below A Quality, not more than one percent (1%) may be B Quality due to air cells over three-eighths inch (3/8"), blood spots (aggregating not more than one-eighth inch (1/8") in diameter), or serious yolk defects. Not more than seven percent (7%) (nine percent (9%) for Jumbo size) Checks are permitted and not more than one percent (1%) Leakers, Dirties, or Loss (due to meat or blood spots) in any combination, except that such Loss may not exceed three-tenths percent (0.30%). Other types of Loss are not permitted.

3. U.S. Grade B.

A. U.S. Consumer Grade B (at origin) shall consist of eggs which are at least ninety percent (90%) B Quality or better, not more than ten percent (10%) may be Checks and not more than one-half percent (0.50%) Leakers, Dirties, or Loss (due to meat or blood spots) in any combination, except that such Loss may not exceed three-tenths percent (0.30%). Other types of Loss are not permitted.

B. U.S. Consumer Grade B (at destination) shall consist of eggs which are at least ninety percent (90%) B Quality or better, not more than ten percent (10%) may be Checks and not more than one percent (1%) Leakers, Dirties, or Loss (due to meat or blood spots) in any combination, except that such Loss may not exceed three-tenths percent (0.30%). Other types of Loss are not permitted.

4. Additional tolerances:

A. In lots of two (2) or more cases:

(I) For Grade AA—No individual case may exceed ten percent (10%) less AA Quality eggs than the minimum permitted for the lot average.

(II) For Grade A—No individual case may exceed ten percent (10%) less A Quality eggs than the minimum permitted for the lot average.

(III) For Grade B—No individual case may exceed ten percent (10%) less B Quality eggs than the minimum permitted for the lot average.

B. For Grades AA, A, and B, no lot shall be rejected or downgraded due to the quality of a single egg except for Loss other than blood or meat spots.

Table I—Summary of U.S. Consumer Grades for Shell Eggs

U.S. Consumer Grade (origin)	Quality required	Tolerance permitted	
		Percent	Quality
Grade AA	87 percent AA	Up to 13 Not over 5	A or B Checks
Grade A	87 percent A or better	Up to 13 Not over 5	B Checks
Grade B	90 percent B or better	Not over 10	Checks
U.S. Consumer Grade (destination)	Quality Required	Tolerance permitted	
		Percent	Quality
Grade AA	72 percent AA	Up to 28 Not over 7	A or B Checks
Grade A	82 percent A or better	Up to 18 Not over 7	B Checks
Grade B	90 percent B or better	Not over 10	Checks

¹ In lots of two or more cases, see Table II of this section for tolerances for an individual case within a lot.

² For the U.S. Consumer grades (at origin), a tolerance of 0.50 percent Leakers, Dirties, or Loss (due to meat or blood spots) in any combination is permitted, except that such Loss may not exceed 0.30 percent. Other types of Loss are not permitted.

³ For the U.S. Consumer grades (destination), a tolerance of 1 percent Leakers, Dirties, or Loss (due to meat or blood spots) in any combination is permitted, except that such Loss may not exceed 0.30 percent. Other types of Loss are not permitted.

⁴ For U.S. Grade AA at destination, at least 10 percent must be A quality or better.

⁵ For U.S. Grade AA and A at origin and destination within the tolerances permitted for B quality, not more than 1 percent may be B quality due to air cells over 3/8 inch, blood spots (aggregating not more than 1/8 inch in diameter), or serious yolk defects.

⁶ For U.S. Grades AA and A Jumbo size eggs, the tolerance for Checks at origin and destination is 7 percent and 9 percent, respectively.

Table II—Tolerance for Individual Case Within a Lot

U.S. Consumer Grade	Case Quality	Origin (percent)	Destination (percent)
Grade AA	AA (min)	77	62
	A or B	13	28
	Check (max)	10	10
Grade A	A (min)	77	72
	B	13	18
	Check (max)	10	10
Grade B	B (min)	80	80
	Check (max)	20	20

SUMMARY OF U.S. STANDARDS FOR QUALITY OF INDIVIDUAL SHELL EGGS Specifications for Each Quality Factor			
Quality Factor	AA Quality	A Quality	B Quality
Shell	Clean Unbroken Practically normal	Clean Unbroken Practically normal	Clean to slightly stained* Unbroken Abnormal
Air Cell	1/8 inch or less in depth Unlimited movement and free or bubbly	3/16 inch or less in depth Unlimited movement and free or bubbly	Over 3/16 inch in depth Unlimited movement and free or bubbly
White	Clear Firm	Clear Reasonably firm	Weak and Watery Small blood and meat spots present**
Yolk	Outline slightly defined Practically free from defects	Outline fairly well defined Practically free from defects	Outline plainly visible Enlarged and flattened Clearly visible germ development but not blood Other serous defects
For eggs with dirty or broken shells, the standards of quality provide two additional qualities. They are:			
Dirty		Checks	
Unbroken. Adhering dirt or foreign material, prominent stains, moderate stained areas in excess of B Quality.		Broken or cracked shell but membranes intact, not leaking.***	
* Moderately stained areas permitted (1/32 of surface in localized, or 1/16 if scattered). ** If they are small (aggregating not more than 1/8 inch in diameter). *** Leaker has broken or cracked shell membranes, and contents leaking or free to leak.]			

[(H)](B) Basis of Grading Service (Sampling).

1. Any grading service in accordance with the regulations in this part shall be for class, quality, quantity, or condition or any combination thereof. Grading service with respect to the determination of the quality of products shall be on the basis of the United States Standards, Grades, and Weights Classes. However, grading service may be rendered with respect to products which are bought and sold on the basis of institutional contract specifications or specifications of the applicant and such service, when approved by the administrator, shall be rendered on the basis of such specifications. The supervision of packaging shall be in accordance with such instructions as may be approved or issued by the administrator.

2. Whenever grading service is performed on a representative sample basis, such sample shall be drawn and consist of not less than the minimum number of cases as indicated in the following table. A minimum of one hundred (100) eggs shall be examined per sample case. For lots which consist of less than one (1) case, a minimum of fifty (50) eggs shall be examined. If the lot consists of less than fifty (50) eggs, all eggs will be examined.

Minimum Number of Cases Comprising a Representative Sample	
Cases in Lot	Cases in Sample
1 case	1
2 to 10, inclusive	2
11 to 25, inclusive	3
26 to 50, inclusive	4
51 to 100, inclusive	5
101 to 200, inclusive	8
201 to 300, inclusive	11
301 to 400, inclusive	13
401 to 500, inclusive	14
501 to 600, inclusive	16

For each additional fifty (50) cases, or fraction thereof, in excess of six hundred (600) cases, one (1) additional case shall be included in the sample.

[(I)](C) Identification of Graded Eggs in Containers.

1. Eggs packaged in containers by licensed dealers for supply or sale to retailers must be identified on each container with either the name and address (city and state), or approved identification number of the dealer under whose authority the eggs were packed and the day, month and year when said eggs were graded. Either a normal dating procedure or a numerical code based on the day of the year may be used. (Example: July 1, 1966, or 182-6; July 2, 1966, or

183-6).

2. The identification shall be stamped or printed in bold legible type upon each container with letters no less than three-sixteenths inch (3/16") in height. The term container includes box, basket, carton, sack, bag, case, or other receptacle.

[(J)](D) Identification of Graded Eggs in Bulk. All eggs in bulk, packed in cases, graded for retail sale, must be accompanied by grading certificates bearing the name and address (city and state), or approved identification number of the dealer under whose authority the eggs were packed and the date when said eggs were graded. The identification may be stamped or printed in bold, legible type with letters no less than three-sixteenths inch (3/16") in height upon a grading certificate of strong paper approximately five inches (5") long and three inches (3") wide which shall be placed under the top flat above the first layer of eggs, or said information may be stamped or printed on the outside of the egg case.

AUTHORITY: section 196.354, RSMo [2000] 2016. Original rule filed April 27, 1964, effective May 7, 1964. For intervening history, please consult the *Code of State Regulations*. Amended: Filed June 27, 2018.

PUBLIC COST: The proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: The proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Mr. Ronald G. Hayes, Division Director, Weights, Measures and Consumer Protection Division, PO Box 630, Jefferson City, MO 65102 or online at Agriculture.MO.Gov/proposed-rules/. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

**Title 2—DEPARTMENT OF AGRICULTURE
Division 90—Weights, Measures and Consumer
Protection
Chapter 38—Unfair Milk Sales Practices Act**

PROPOSED RESCISSION

2 CSR 90-38.010 Definitions. This regulation provided definitions of words or terms (except in those instances where the context clearly indicated otherwise) used in the regulation of this chapter as required by section 416.460, RSMo.

PURPOSE: The rule is being rescinded to allow processors, distributors, and retailers to set their own product prices and compete on a level playing field with other states. Consumers will also benefit from rescission of this rule due to lower prices on milk and dairy products. Milk pricing complaints filed by retail competitors are disrupting our scheduled inspections. Eliminating this burdensome regulation will allow the program to focus on other statutory mandates.

AUTHORITY: section 416.460, RSMo Supp. 1993. This rule was previously filed as 2 CSR 40-3.010. Original rule filed Nov. 26, 1975, effective Dec. 10, 1975. Amended: Filed Sept. 14, 1977 effective Jan. 1, 1978. Amended: Filed July 10, 1984, effective Oct. 11, 1984. Rescinded: Filed June 27, 2018.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed rescission will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rescission with Mr. Ronald G. Hayes, Division Director, Weights, Measures and Consumer Protection Division, PO Box 630, Jefferson City, MO 65102 or online at Agriculture.MO.Gov/proposed-rules/. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

**Title 2—DEPARTMENT OF AGRICULTURE
Division 90—Weights, Measures and Consumer
Protection
Chapter 38—Unfair Milk Sales Practices Act**

PROPOSED RESCISSION

2 CSR 90-38.020 Unfair Milk Sales Practices. This regulation placed prohibitions or requirements on practices done with the intent of or with the effect of unfairly diverting trade from a competitor or otherwise injuring a competitor or destroying competition or of creating a monopoly.

PURPOSE: The rule is being rescinded to allow processors, distributors, and retailers to set their own product prices and compete on a level playing field with other states. Consumers will also benefit from rescission of this rule due to lower prices on milk and dairy products. Milk pricing complaints filed by retail competitors are disrupting our scheduled inspections. Eliminating this burdensome regulation will allow the program to focus on other statutory mandates.

AUTHORITY: section 416.460, RSMo Supp. 1993. This rule was previously filed as 2 CSR 40-3.020. Original rule filed Nov. 26, 1975, effective Dec. 10, 1975. For intervening history, please consult the *Code of State Regulations*. Rescinded: Filed June 27, 2018.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed rescission will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rescission with Mr. Ronald G. Hayes, Division Director, Weights, Measures and Consumer Protection Division, PO Box 630, Jefferson City, MO 65102 or online at Agriculture.MO.Gov/proposed-rules/. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

**Title 2—DEPARTMENT OF AGRICULTURE
Division 90—Weights, Measures and Consumer
Protection
Chapter 38—Unfair Milk Sales Practices Act**

PROPOSED RESCISSION

2 CSR 90-38.030 Procedures. This rule was designed to enable the director to acquire information necessary for enforcement of the Act, and give the director the means necessary to gain price and cost information from processors, distributors and retailers of milk products.

PURPOSE: The rule is being rescinded to allow processors, distributors, and retailers to set their own product prices and compete on a level playing field with other states. Consumers will also benefit from rescission of this rule due to lower prices on milk and dairy products. Milk pricing complaints filed by retail competitors are disrupting our scheduled inspections. Eliminating this burdensome regulation will allow the program to focus on other statutory mandates.

AUTHORITY: section 416.460, RSMo Supp. 1993. This rule was previously filed as 2 CSR 40-3.030. Original rule filed Nov. 26, 1975, effective Dec. 10, 1975. Amended: Filed July 10, 1984, effective Oct. 11, 1984. Rescinded: Filed June 27, 2018.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed rescission will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to these proposed rescission with Mr. Ronald G. Hayes, Division Director, Weights, Measures and Consumer Protection Division, PO Box 630, Jefferson City, MO 65102 or online at Agriculture.MO.Gov/proposed-rules/. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

**Title 2—DEPARTMENT OF AGRICULTURE
Division 90—Weights, Measures and Consumer
Protection
Chapter 38—Unfair Milk Sales Practices Act**

PROPOSED RESCISSION

2 CSR 90-38.040 Separability and Effective Period. This rule stated the separability of the rules and their provisions within Chapter 38 and the effective period of these rules.

PURPOSE: The rule is being rescinded to allow processors, distributors, and retailers to set their own product prices and compete on a level playing field with other states. Consumers will also benefit from rescission of this rule due to lower prices on milk and dairy products. Milk pricing complaints filed by retail competitors are disrupting our scheduled inspections. Eliminating this burdensome regulation will allow the program to focus on other statutory mandates.

AUTHORITY: section 416.460, RSMo Supp. 1997. This rule was previously filed as 2 CSR 40-3.040. Original rule filed Nov. 26, 1975, effective Dec. 10, 1975. For intervening history, please consult the *Code of State Regulations*. Rescinded: Filed June 27, 2018.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed rescission will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rescission with Mr. Ronald G. Hayes, Division Director, Weights, Measures and Consumer Protection Division, PO Box 630, Jefferson City, MO 65102 or online at Agriculture.MO.Gov/proposed-rules/. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

**Title 2—DEPARTMENT OF AGRICULTURE
Division 90—Weights, Measures and Consumer
Protection
Chapter 38—Unfair Milk Sales Practices Act**

PROPOSED RESCISSION

2 CSR 90-38.050 Enforcement of 2 CSR 90-38.030 Stayed or Enjoined. This rule provided alternate provisions concerning price filings, volume price differentials and cost records which were filed in 1970 and upheld in 1972 by the Missouri Supreme Court, if enforcement of all or part of 2 CSR 90-38.030 is stayed or enjoined by any court in this state.

PURPOSE: The rule is being rescinded to allow processors, distributors, and retailers to set their own product prices and compete on a level playing field with other states. Consumers will also benefit from rescission of this rule due to lower prices on milk and dairy products. Milk pricing complaints filed by retail competitors are disrupting our scheduled inspections. Eliminating this burdensome regulation will allow the program to focus on other statutory mandates.

AUTHORITY: section 416.460, RSMo Supp. 1993. This rule was previously filed as 2 CSR 40-3.050. Original rule filed June 22, 1970, effective July 2, 1970. Amended: Filed July 10, 1984, effective Oct. 11, 1984. Rescinded: Filed June 27, 2018.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed rescission will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rescission with Mr. Ronald G. Hayes, Division Director, Weights, Measures and Consumer Protection Division, PO Box 630, Jefferson City, MO 65102 or online at Agriculture.MO.Gov/proposed-rules/. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

**Title 5—DEPARTMENT OF ELEMENTARY AND
SECONDARY EDUCATION
Division 20—Division of Learning Services
Chapter 300—Office of Special Education**

PROPOSED RESCISSION

5 CSR 20-300.140 Extraordinary Cost Fund. This rule provided administrative procedures to public school districts to seek reimbursement for extraordinary cost, if any, associated with serving students with disabilities, as defined by the 1997 Amendments to Individuals with Disabilities Education Act (IDEA). This rule set forth a plan for distributing funds to public school districts which educate students whose service costs exceed five times the district's current expenditure per eligible pupil.

PURPOSE: This rule is being rescinded due to the establishment of the High Need Fund pursuant to the Individuals with Disabilities Education Act, 34 CFR Section 300.704.

AUTHORITY: section 162.975(1), RSMo Supp. 1999. This rule previously filed as 5 CSR 70-742.170. Original rule filed Aug. 8, 1997, effective March 30, 1998. Amended: Filed July 28, 2000, effective Feb. 28, 2001. Moved to 5 CSR 20-300.140, effective Aug. 16, 2011.

Rescinded: Filed June 21, 2018.

PUBLIC COST: *This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.*

PRIVATE COST: *This proposed rescission will not cost private entities more than five hundred dollars (\$500) in the aggregate.*

NOTICE TO SUBMIT COMMENTS: *Anyone may file a statement in support of or in opposition to this proposed rescission with the Department of Elementary and Secondary Education, Attn: Stephen Barr, Assistant Commissioner, Office of Special Education, PO Box 480, Jefferson City, MO 65102-0480 or email specialeducation@dese.mo.gov. To be considered, comments must be received within thirty (30) days after publication of this notice in the Missouri Register. No public hearing is scheduled.*

**Title 5—DEPARTMENT OF ELEMENTARY AND
SECONDARY EDUCATION
Division 20—Division of Learning Services
Chapter 400—Office of Educator Quality**

PROPOSED AMENDMENT

5 CSR 20-400.510 Certification Requirements for Teacher of Early Childhood Education (Birth – Grade 3). The State Board of Education is proposing to amend part (1)(B)4.B.(I) and section (2).

PURPOSE: *The amendment updates the Certification Requirements for Teacher of Early Childhood Education Birth – Grade 3.*

(1) An applicant for a Missouri certificate of license to teach Early Childhood Education (Birth – Grade 3) who possesses good moral character may be granted an initial Missouri certificate of license to teach Early Childhood Education (Birth – Grade 3) subject to the certification requirements found in 5 CSR 20-400.500 and the following additional certification requirements specific to Early Childhood Education (Birth – Grade 3):

(B) Professional Requirements. A minimum of sixty (60) semester hours of professional preparation. Competency must be demonstrated to the satisfaction of the educator preparation program for the following topics:

1. Content Planning and Delivery. Candidates are prepared with a deep knowledge of and understand the relationships among curriculum, instruction, and assessment—

- A. Curriculum and Instructional Planning;
- B. Instructional Strategies and Techniques in Content Area Specialty;
- C. Assessment, Student Data, and Data-Based Decision-Making;

- D. Strategies for Content Literacy;
- E. Critical Thinking and Problem Solving;
- F. English Language Learning;

2. Individual Student Needs. Candidates build a robust knowledge of learners and the learning environment—

- A. Psychological Development of the Child and Adolescent;
- B. Psychology/Education of the Exceptional Child;
- C. Differentiated Learning;
- D. Classroom Management;
- E. Cultural Diversity;
- F. Educational Psychology;

3. Schools and the Teaching Profession. Candidates fully understand the role of schools and schooling as well as the professional responsibilities of teachers, including a means of professional growth—

- A. Consultation and Collaboration;

B. Legal/Ethical Aspects of Teaching;

4. Content Knowledge for Teaching and Teaching and Learning Strategies for the Young Child (minimum requirement of thirty (30) semester hours)—

A. Early Childhood Principles:

- (I) Child Development;
- (II) Play-Based and Inquiry-Based Learning;
- (III) Observing and Assessing Young Children;
- (IV) Language Acquisition;

B. Methods of Teaching and Differentiated Instruction in the following integrated areas:

(I) [Language Arts (including reading, writing, speaking, and listening);] **Early Literacy (minimum of six (6) semester hours) to address curriculum, instruction, and assessment of—**

- (a) Language acquisition;
- (b) Phonological and phonemic awareness;
- (c) Phonics;
- (d) Vocabulary;
- (e) Fluency;
- (f) Comprehension; and
- (g) Writing process using authentic text and purposes;

- (II) Math;
- (III) Health;
- (IV) Science;
- (V) Nutrition;
- (VI) Social Studies;
- (VII) Music;
- (VIII) Safety;
- (IX) Movement;
- (X) Art; and
- (XI) Drama;

5. Home-School-Community Relations (minimum requirement of six (6) semester hours)—

- A. Families as Educational Partners;
- B. Family Engagement; and
- C. Linking Families with Community Resources;

6. Program Management (minimum requirement of six (6) semester hours)—

- A. Program Administration and Management;
- B. Health, Nutrition, and Safety of Young Children; and
- C. Environmental Organization and Design; and

(2) The requirements of this rule shall become effective August 1, 2017/79.

AUTHORITY: *[sections 168.011, 168.405, and 168.409, RSMo 2000, and] sections 161.092, 168.011, 168.021, 168.071, 168.081, [and] 168.400, 168.405, and 168.409, RSMo [Supp. 2013] 2016. Original rule filed Oct. 29, 2013, effective May 30, 2014. Amended: Filed June 22, 2018.*

PUBLIC COST: *This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.*

PRIVATE COST: *This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.*

NOTICE TO SUBMIT COMMENTS: *Anyone may file a statement in support of or in opposition to this proposed amendment with the Department of Elementary and Secondary Education, Attention: Dr. Paul Katnik, Assistant Commissioner, Office of Educator Quality, PO Box 480, Jefferson City, MO 65102-0480 or by email to educatorquality@dese.mo.gov. To be considered, comments must be received within thirty (30) days after publication of this notice in the Missouri Register. No public hearing is scheduled.*

**Title 5—DEPARTMENT OF ELEMENTARY AND
SECONDARY EDUCATION**

**Division 20—Division of Learning Services
Chapter 400—Office of Educator Quality**

PROPOSED AMENDMENT

5 CSR 20-400.520 Certification Requirements for Teacher of Elementary Education (Grades 1-6). The State Board of Education is proposing to amend sections (1) and (2).

PURPOSE: The amendment updates the Certification Requirements for Teacher of Elementary Education Grades 1-6.

(1) An applicant for a Missouri certificate of license to teach Elementary Education (Grades 1-6) who possesses good moral character may be granted an initial Missouri certificate of license to teach Elementary Education (Grades 1-6) subject to the certification requirements found in 5 CSR 20-400.500 and the following additional certification requirements specific to Elementary Education (Grades 1-6):

(A) General Requirements. An applicant for a Missouri certificate of license to teach who has successfully completed an educator preparation program approved by the Missouri Department of Elementary and Secondary Education (department) must comply with the following additional criteria:

1. The applicant must possess a baccalaureate degree from a regionally accredited college or university;

2. The applicant must have a recommendation from the designated official at a baccalaureate or higher-level educator preparation program approved by the department;

3. The applicant must possess an overall grade point average to meet the following specifications:

A. For applicants graduating before the spring semester of the year 2017 from a baccalaureate program approved by the department, a grade point average of 2.50 or higher on a 4.00 scale, and in the major area of study;

B. For applicants graduating in or after the spring semester of the year 2017 from a baccalaureate program approved by the department, a cumulative grade point average on a 4.00 scale of 2.75 or higher, and a grade point average of 3.00 or higher in professional education and the specific content area for which certification is sought; or

C. For applicants graduating in or after the spring semester of the year 2017 from a baccalaureate program who do not meet the appropriate cumulative grade point average requirements, competency may otherwise be demonstrated by achievement of exit assessment scores greater than or equal to a score deemed satisfactory by the State Board of Education (board) to qualify for forgiveness of a disqualifying cumulative grade point average. Such satisfactory score shall be higher than the Missouri qualifying score./;

4. The applicant must achieve a score equal to or in excess of the qualifying score on the required exit assessment(s) as defined in 5 CSR 20-400.310 and 5 CSR 20-400.440. The official score shall be submitted to the department;

5. The applicant must complete the professional requirements as determined by the recommending educator preparation program, which may exceed these minimum requirements; and

6. Individuals who completed an educator preparation program outside of the United States shall provide documentation of completion of coursework in the following:

A. English Composition, two (2) courses, each a minimum of two (2) semester hours;

B. U.S. History, three (3) semester hours; and

C. U.S. Government, three (3) semester hours;

(B) Professional Requirements. A minimum of thirty-six (36) semester hours of professional preparation. Competency must be demonstrated to the satisfaction of the educator preparation program

for the following topics:

1. Content Planning and Delivery. Candidates are prepared with a deep knowledge of and understand the relationships among curriculum, instruction, and assessment—

A. Curriculum and Instructional Planning;

B. Instructional Strategies and Techniques in Content Area Specialty;

C. Assessment, Student Data, and Data-Based Decision-Making;

D. Strategies for Content Literacy;

E. Critical Thinking and Problem Solving; and

F. English Language Learning;

2. Individual Student Needs. Candidates build a robust knowledge of learners and the learning environment—

A. Psychological Development of the Child and Adolescent;

B. Psychology/Education of the Exceptional Child;

C. Differentiated Learning;

D. Classroom Management;

E. Cultural Diversity; and

F. Education Psychology;

3. Schools and the Teaching Profession. Candidates fully understand the role of schools and schooling as well as the professional responsibilities of teachers, including a means of professional growth—

A. Consultation and Collaboration; and

B. Legal/Ethical Aspects of Teaching;

4. Content Knowledge for Teaching and Teaching and Learning Strategies (minimum requirement of twenty-one (21) semester hours)—

A. At a minimum, the teaching method competencies shall include:

(I) Elementary Literacy (minimum total of twelve (12) semester hours)—[to include *Children's Literature, English Language Arts, and Language Acquisition*]; to address curriculum, instruction, and assessment of—

(a) Language acquisition;

(b) Phonological and phonemic awareness;

(c) Phonics;

(d) Vocabulary;

(e) Fluency;

(f) Comprehension; and

(g) Writing process using authentic text and purposes;

(II) Mathematics (minimum of six (6) total semester hours);

(III) Science; and

(IV) Social Science;

B. Integration of the following areas:

(I) Art;

(II) Music;

(III) Health and Physical Education; and

(IV) Technology in Education; and

(2) The requirements of this rule shall become effective August 1, 2017/7/9.

AUTHORITY: [sections 168.011, 168.405, and 168.409, RSMo 2000, and] sections 161.092, 168.011, 168.021, 168.071, 168.081, [and] 168.400, 168.405, and 168.409, RSMo [Supp. 2013] 2016. Original rule filed Oct. 29, 2013, effective May 30, 2014. Amended: Filed June 22, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Department of Elementary and Secondary Education, Attention: Dr. Paul Katnik, Assistant Commissioner, Office of Educator Quality, PO Box 480, Jefferson City, MO 65102-0480 or by email to educatorquality@dese.mo.gov. To be considered, comments must be received within thirty (30) days after publication of this notice in the Missouri Register. No public hearing is scheduled.

Title 5—DEPARTMENT OF ELEMENTARY AND SECONDARY EDUCATION

Division 20—Division of Learning Services Chapter 400—Office of Educator Quality

PROPOSED AMENDMENT

5 CSR 20-400.560 Certification Requirements for Teacher of Special Education. The State Board of Education is proposing to amend part (4)(A)4.B.(I), subparagraphs (5)(A)4.A.-G, and section (8).

PURPOSE: The amendment is to update the Certification Requirements for Teachers of Special Education.

(4) An applicant for a Missouri certificate to teach Early Childhood Special Education (Birth – Grade 3) who possesses a baccalaureate degree from a college or university having an educator preparation program approved by the department, or from a college or university having an education program approved by the state education agency in states other than Missouri may be granted an initial Missouri certificate of license to teach Early Childhood Special Education (Birth – Grade 3) subject to the certification requirements found in 5 CSR 20-400.500 and the following additional certification requirements:

(A) Professional Requirements. A minimum of sixty (60) semester hours of professional preparation. Competency must be demonstrated to the satisfaction of the educator preparation institution for each topic listed.

1. Content Planning and Delivery. Candidates are prepared with a deep knowledge of and understand the relationship among curriculum, instruction, and assessment—

- A. Curriculum and Instructional Planning;
- B. Instructional Strategies and Techniques in Content Area Specialty;
- C. Assessment, Student Data, and Data-Based Decision-Making;
- D. Critical Thinking and Problem Solving;
- E. English Language Learning; and
- F. Evaluation of Abilities and Achievement (instruction in interpretation of individualized, formative, and summative assessments, eligibility procedures, and assessment to support evidence-based instruction).

2. Individual Student Needs. Candidates build a robust knowledge of learners and the learning environment—

- A. Psychological Development of the Child and Adolescent;
- B. Psychology/Education of the Exceptional Child;
- C. Differentiated Learning;
- D. Classroom Management;
- E. Behavior Intervention Strategies;
- F. Cultural Diversity; and
- G. Educational Psychology.

3. Schools and the Teaching Profession. Candidates fully understand the role of schools and schooling as well as the professional responsibilities of teachers, including a means of professional growth—

- A. Consultation and Collaboration;
- B. Legal/Ethical Aspects of Teaching;
- C. Tiered Systems for Supporting Instruction and Behavior;

- D. Families as Educational Partners;
- E. Family Engagement;
- F. Linking Families with Resources; and
- G. Individualized Education Plans and the Special Education Process.

4. Teaching and Supporting Learning of the Young Child—

- A. Early Childhood Principles;
 - (I) Child Development;
 - (II) Play-Based and Inquiry-Based Learning;
 - (III) Observing and Assessing Young Children;
 - (IV) Language Acquisition; and
 - (V) Alternative and Augmentative Communication;
- B. Methods of Teaching and Differentiated Instruction in the following integrated areas (minimum requirement of fifteen (15) hours):

(I) *[Language Arts (including reading, writing, speaking, and listening);]* **Early Literacy (minimum of six (6) semester hours to address curriculum, instruction, and assessment of—**

- (a) Language acquisition;**
- (b) Phonological and phonemic awareness;**
- (c) Phonics;**
- (d) Vocabulary;**
- (e) Fluency;**
- (f) Comprehension; and**
- (g) Writing process using authentic text and purposes;**

es;

- (II) Math;
- (III) Health;
- (IV) Science;
- (V) Nutrition;
- (VI) Social Studies;
- (VII) Music;
- (VIII) Safety;
- (IX) Movement;
- (X) Art;
- (XI) Drama; and
- (XII) Instructional and Assistive Technology;

5. Program Management—

- A. Program Administration and Management;
- B. Health, Nutrition, and Safety of Young Children; *[and]*
- C. Environmental Organization and Design; **and**
- D. Procedural Safeguards;

(5) An applicant for a Missouri certificate of license to teach students with Mild/Moderate Cross-Categorical Disabilities (Kindergarten – Grade 12) who possesses a baccalaureate degree in Special Education from a college or university having an educator preparation program approved by the department or from a college or university having an educator preparation program approved by the state agency in states other than Missouri may be granted an initial Missouri certificate of license to teach students with Mild/Moderate Cross-Categorical Disabilities (Kindergarten – Grade 12) subject to the certification requirements found in 5 CSR 20-400.500 and the following additional certification requirements:

(A) Professional Requirements. A minimum of sixty (60) semester hours of professional preparation. Competency must be demonstrated to the satisfaction of the educator preparation institution for each topic listed—

1. Content Planning and Delivery. Candidates are prepared with a deep knowledge of and understand the relationships among curriculum, instruction, and assessment—

- A. Curriculum and Instructional Planning;
- B. Instructional Strategies and Techniques in Content Area Specialty;
- C. Assessment, Student Data, and Data-Based Decision-Making;
- D. Strategies for Content Literacy;

- E. Critical Thinking and Problem Solving;
- F. English Language Learning;
- G. Evaluation of Abilities and Achievement (instruction in interpretation of individualized, formative, and summative assessments, eligibility procedures, and assessment to support evidence-based instruction);
- H. Transition Processes, including Career Education or Career Readiness; and
- 2. Individual Student Needs. Candidates build a robust knowledge of learners and the learning environment—
 - A. Psychological Development of the Child and Adolescent;
 - B. Psychology/Education of the Exceptional Child;
 - C. Differentiated Learning;
 - D. Classroom Management;
 - E. Behavior Intervention Strategies;
 - F. Cultural Diversity;
 - G. Educational Psychology; and
 - H. Language Development of the Exceptional Child;
- 3. Schools and the Teaching Profession. Candidates fully understand the role of schools and schooling as well as the professional responsibilities of teachers, including a means of professional growth—
 - A. Consultation and Collaboration;
 - B. Legal/Ethical Aspects of Teaching;
 - C. Tiered Systems for Supporting Instruction and Behavior;
 - D. Families as Educational Partners;
 - E. Family Engagement;
 - F. Linking Families with Resources; and
 - G. Individualized Education Plans and the Special Education Process;
- 4. Teaching and Learning Strategies—
 - A. Literacy *[(three (3) courses required, minimum total of nine (9) semester hours). To include coursework in reading and writing, and to include instructional interventions for students with reading deficits;] (a minimum total of twelve (12) semester hours) to address specialized instruction in curriculum, instruction, assessment, and intensive intervention of—*
 - (I) Language acquisition;
 - (II) Phonological and phonemic awareness;
 - (III) Phonics;
 - (IV) Vocabulary;
 - (V) Fluency;
 - (VI) Comprehension; and
 - (VII) Writing process using authentic text and purposes;
 - [B. Children's Literature;*
 - C. Language Arts;]*
 - [D./B. Science;*
 - [E./C. Social Science;*
 - [F./D. Instructional and Assistive Technology; and*
 - [G./E. Mathematics (two (2) courses required, minimum of six (6) total semester hours) to include instructional interventions for students with mathematics deficits; and*

(8) The requirements of this rule shall become effective August 1, 2017/9.

AUTHORITY: *[sections 168.011, 168.405, and 168.409, RSMo 2000, and] sections 161.092, 168.011, 168.021, 168.071, 168.081, [and] 168.400, 168.405, and 168.409, RSMo [Supp. 2013] 2016. Original rule filed Oct. 29, 2013, effective May 30, 2014. Amended: Filed June 21, 2018.*

PUBLIC COST: *This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.*

PRIVATE COST: *This proposed amendment will not cost private enti-*

ties more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: *Anyone may file a statement in support of or in opposition to this proposed amendment with the Department of Elementary and Secondary Education, Attention: Dr. Paul Katnik, Assistant Commissioner, Office of Educator Quality, PO Box 480, Jefferson City, MO 65102-0480 or by email to educatorquality@dese.mo.gov. To be considered, comments must be received within thirty (30) days after publication of this notice in the Missouri Register. No public hearing is scheduled.*

Title 5—DEPARTMENT OF ELEMENTARY AND SECONDARY EDUCATION

Division 20—Division of Learning Services Chapter 400—Office of Educator Quality

PROPOSED AMENDMENT

5 CSR 20-400.640 Certification Requirements for Initial Student Services Certificate. The State Board of Education is proposing to amend sections (1) and (2).

PURPOSE: *This amendment updates the Initial Student Services Certificate for School Psychological Examiner (Kindergarten-Grade 12) and removes the issuance of an Initial Student Services Certificate for the area of Speech-Language Pathologist.*

(1) An applicant for a Missouri Initial Student Services Certificate, valid for a period of four (4) years, may be granted an Initial Student Services Certificate subject to the certification requirements found in 5 CSR 20-400.500 and the following additional requirements:

(C) The Initial Student Services Certificate for Secondary Counselor (Grades 7-12), valid for a period of four (4) years from the effective date of the certificate, will be issued to those persons meeting the following requirements:

1. Recommendation for certification from the designated official of an approved counselor preparation program;
2. Completion of a course in Psychology/Education of the Exceptional Child; and
3. The applicant must possess either—
 - A. A master's degree with a major emphasis in guidance and counseling from a college or university meeting approval of the department based upon the completion of a planned program of at least forty-two (42) semester hours of approved graduate credit in courses in guidance and counseling with at least twelve (12) semester hours focused upon guidance in secondary schools—

(I) Knowledge and/or competency in each of the following areas:

- (a) Student Development—
 - I. Human Growth and Development;
 - II. Counseling Theories and Interventions;
 - III. Helping Relationships;
 - IV. Social and Cultural Diversity;
 - V. Appraisal of Student Growth and Achievement;

and

- VI. Career Development and Planning;
- (b) Program Implementation—
 - I. Structural Components;
 - II. Program Components;
 - III. Technology; and
 - IV. Program, Personnel, and Results Evaluation;
- (c) Professional Relationships—
 - I. Interpersonal Skills;
 - II. Collaboration;
 - III. Consultation Theories and Strategies; and
 - IV. School and Community Involvement;
- (d) Leadership and Advocacy—

- I. Personal Well-Being;
- II. Leadership and Professionalism;
- III. Student Advocacy;
- IV. Program Leadership; and
- V. School Climate and Culture; and
- (e) Ethical and Professional Conduct—
 - I. Ethical Standards;
 - II. Professional Standards;
 - III. District and School Policies; and
 - IV. Legal Requirements; and

(II) Field and Clinical Experience (minimum of three hundred (300) clock hours)—

(a) Culminating Clinical Experience. This refers to a secondary school placement(s) in which candidates actively participate and complete class assignments and work with students as requested while under the supervision of a counselor. The candidate should experience a wide range of class settings and have opportunities to collaborate with the supervising counselor, preparation program supervisors, and/or other stakeholders working to improve student learning./;

B. A master's degree or higher degree in education, school counseling, counseling, counseling psychology, rehabilitation counseling, or a closely-related mental health discipline; and completed additional graduate coursework specific to school counseling, as designated by the recommending certification official approved by the department; along with the following:

(I) Possess a bachelor's degree in education from an educator preparation program approved by the department; or

(II) Complete a curriculum in teaching methods and practices, classroom management, and the psychology of the exceptional child, as specified by the recommending certification officer of a program approved by the department; and

(III) Field and Clinical Experience (minimum of three hundred (300) clock hours)—

(a) Culminating Clinical Experience. This refers to an elementary school placement(s) in which candidates actively participate and complete class assignments and work with students as requested while under the supervision of a counselor. The candidate should experience a wide range of class settings and have opportunities to collaborate with the supervising counselor, preparation program supervisors, and/or other stakeholders working to improve student learning;

4. Must achieve a score equal to or in excess of the qualifying score of any assessment(s) required by the board. The official score report shall be submitted to the department;

(D) The Initial Student Services Certificate for School Psychological Examiner (Kindergarten – Grade 12), valid for a period of four (4) years from the effective date of the certificate, will be issued to those persons meeting the following requirements:

1. The applicant shall hold a valid Missouri professional teaching certificate or student services certificate of license to teach as an elementary or secondary school counselor;

[A. Counseling Psychology;

B. Educational Psychology;

C. School Counseling; and

D. Education;]

2. Completion of a master's degree from a college or university meeting approval of the Missouri Department of Elementary and Secondary Education in one (1) of the following areas:

A. Counseling Psychology;

B. Educational Psychology;

C. School Counseling; and

D. Education;

[2./3. Recommendation for certification from the designated official of an approved Psychological Examiner preparation program;

[3./4. Completion of a course in Psychology/Education of the Exceptional Child; and]

5. The applicant must achieve a score equal to or in excess

of the qualifying score on the required exit assessment(s) as defined in 5 CSR 20-400.310 and 5 CSR 20-400.440. The official score shall be submitted to the department; and

[4./6. A minimum of twenty-four (24) semester hours of professional preparation at the graduate level with competencies demonstrated in all areas listed to the satisfaction of an approved preparation program—

A. Course/s/ Areas—

(I) Psychological Development: Child, Adolescent, or Developmental Psychology;

(II) Psychology of Education;

(III) Statistical Methods;

(IV) [Mental Hygiene or] Psychology of Personality or Psychodiagnostics;

(V) Psychological Tests and Measures for the Analysis of Student Performance;

(VI) Individual Intelligence Tests; and

(VII) Individual Diagnostic Assessments (other than the Wechsler [Intelligence] Scales [for Children] and the Stanford-Binet Intelligence Scale);

B. Competencies—

(I) Applying Methods and/or Techniques of Interpretation of Tests;

(II) [Analysis] Analyzing and [Diagnosis of Learning Problems, including special consideration of low-incidence populations] Identifying Differences to include tiered systems for supporting instruction and behavior;

(III) [Interpretation of] Interpreting Formal and Informal Diagnostic Assessments and [their Application for Prescriptive Instruction] Applying to Guide Interventions;

(IV) [Utilization of] Utilizing Knowledge of Classroom Environment, Psychological Principles, and [Test Data] Data to [Plan for Management of Special Needs Children] assist in the development of student educational plans;

(V) Applying Diagnostic Interviewing Techniques;

(VI) [Process of Staffing] Collaborating and Consulting with Other Professionals to [Develop] Identify Instructional Strategies; and]

(VII) [Administration and Interpretation of] Administering and Interpreting the Wechsler [Intelligence] Scales [for Children and], the Stanford-Binet Intelligence Scale, and other psychoeducational instruments; and

(VIII) Providing services consistent with ethical, legal, and professional standards; and

C. Field and Clinical Experiences (minimum of one hundred fifty (150) clock hours)—

(I) Culminating Clinical Experience. This culminating clinical experience must be in an educational [or clinical] setting with children and youth of school [and the] age while under the supervision of a certified School Psychological Examiner or School Psychologist. The culminating clinical experience must include the administration and interpretation of individual intelligence tests, formal and informal diagnostic procedures, and the application of the information to develop instructional strategies./;

(E) The Initial Student Services Certificate for School Psychologist, valid for a period of four (4) years from the effective date of the certificate, will be issued to those persons meeting the following requirements:

1. Completion of a specialist or higher degree with a major emphasis in school psychology from an approved School Psychologist preparation program;

2. Recommendation for certification from the designated official of a School Psychologist preparation program approved by the department;

3. A minimum of sixty (60) semester hours of professional preparation at the graduate level with competencies demonstrated in all areas listed to the satisfaction of an approved School Psychologist preparation program—

- A. Psychological Foundations—
 - (I) Biological Bases of Behavior;
 - (II) Human Learning;
 - (III) Social and Cultural Bases of Behavior;
 - (IV) Child and Adolescent Development;
 - (V) Individual Differences, including human exceptionalities; and
 - (VI) Developmental Psychology;
- B. Educational Foundations—
 - (I) Instructional Design; and
 - (II) Organization and Operations of Schools;
- C. Interventions/Problem Solving—
 - (I) Diverse Methods and Models of Assessment;
 - (II) Linked to Direct Interventions; and
 - (III) Linked to Indirect Interventions;
- D. Statistics and Research Methodologies—
 - (I) Statistics;
 - (II) Research and Evaluation Methods; and
 - (III) Measurement; and
- E. Professional School Psychology—
 - (I) History and Foundations of School Psychology;
 - (II) Legal and Ethical Issues;
 - (III) Professional Issues and Standards;
 - (IV) Alternative Models for Delivery of School Psychological Services;
 - (V) Emergent Technologies; and
 - (VI) Roles and Functions of the School Psychologist;
- 4. Competencies—

A. Data-Based Decision Making and Accountability. School psychologists have knowledge of varied models and methods of assessment and data collection methods for identifying strengths and needs, developing effective services and programs, and measuring progress and outcomes. As part of a systematic and comprehensive process of effective decision making and problem solving that permeates all aspects of service delivery, school psychologists demonstrate skills to use psychological and educational assessment, data collection strategies, and technology resources and apply results to design, implement, and evaluate response to services and programs;

B. Consultation and Collaboration. School psychologists have knowledge of varied models and strategies of consultation, collaboration, and communication applicable to individuals, families, groups, and systems and methods to promote effective implementation of services. As part of a systematic and comprehensive process of effective decision making and problem solving that permeates all aspects of service delivery, school psychologists demonstrate skills to consult, collaborate, and communicate effectively with others;

C. Interventions and Instructional Support to Develop Academic Skills. School psychologists have knowledge of biological, cultural, and social influences on academic skills; human learning, cognitive, and developmental processes; and evidence-based curricula and instructional strategies. School psychologists, in collaboration with others, demonstrate skills to use assessment and data collection methods and to implement and evaluate services that support cognitive and academic skills;

D. Interventions and Mental Health Services to Develop Social and Life Skills. School psychologists have knowledge of biological, cultural, developmental, and social influences on behavior and mental health, behavioral and emotional impacts on learning and life skills, and evidence-based strategies to promote social-emotional functioning and mental health. School psychologists, in collaboration with others, demonstrate skills to use assessment and data-collection methods and to implement and evaluate services that support socialization, learning, and mental health;

E. School-Wide Practices to Promote Learning. School psychologists have knowledge of school and systems structure, organization, and theory; general and special education; technology resources; and evidence-based school practices that promote learning and mental health. School psychologists, in collaboration with others,

demonstrate skills to develop and implement practices and strategies to create and maintain effective and supportive learning environments for children and others;

F. Preventive and Responsive Services. School psychologists have knowledge of principles and research related to resilience and risk factors in learning and mental health, services in schools and communities to support multi-tiered prevention, and evidence-based strategies for effective crisis response. School psychologists, in collaboration with others, demonstrate skills to promote services that enhance learning, mental health, safety, and physical well-being through protective and adaptive factors and to implement effective crisis preparation, response, and recovery;

G. Family-School Collaboration Services. School psychologists have knowledge of principles and research related to family systems, strengths, needs, and culture; evidence-based strategies to support family influences on children's learning and mental health; and strategies to develop collaboration between families and schools. School psychologists, in collaboration with others, demonstrate skills to design, implement, and evaluate services that respond to culture and context and facilitate family and school partnerships and interactions with community agencies for enhancement of academic and social-behavioral outcomes for children;

H. Diversity in Development and Learning. School psychologists have knowledge of individual diversity factors for children, families, and schools, including factors related to culture, context, and individual and role differences; and evidence-based strategies to enhance services and address potential influences related to diversity. School psychologists demonstrate skills to provide effective professional services that promote effective functioning for individuals, families, and schools with diverse characteristics, cultures, and backgrounds and across multiple contexts, with recognition that an understanding and respect for diversity in development and learning and advocacy for social justice are foundations for all aspects of service delivery;

I. Research and Program Evaluation. School psychologists have knowledge of research design, statistics, measurement, varied data collection and analysis techniques, and program evaluation sufficient for understanding research and interpreting data in applied settings. School psychologists demonstrate skills to evaluate and apply research as a foundation for service delivery and, in collaboration with others, use various techniques and technology resources for data collection, measurement, and analysis to support effective practices at the individual, group, and/or systems levels;

J. Legal, Ethical, and Professional Practice. School psychologists have knowledge of the history and foundations of school psychology; multiple service models and methods; ethical, legal, and professional standards; and other factors related to professional identity and effective practice as school psychologists. School psychologists demonstrate skills to provide services consistent with ethical, legal, and professional standards; engage in responsive ethical and professional decision-making; collaborate with other professionals; and apply professional work characteristics needed for effective practice as school psychologists, including respect for human diversity and social justice, communication skills, effective interpersonal skills, responsibility, adaptability, initiative, dependability, and technology skills; and

K. Information and Technology. Demonstrate an understanding of information sources and technology relevant to their work;

5. The applicant must achieve a score equal to or in excess of the qualifying score on the required exit assessment(s) as defined in 5 CSR 20-400.310 and 5 CSR 20-400.440. The official score shall be submitted to the department; and

6. Field and Clinical Experiences (minimum of one (1) year or one thousand two hundred (1,200) clock hours)—

A. Culminating Clinical Experience. This culminating clinical experience must be a planned program of experiences and supervised internship designed to achieve these competencies as part of an approved graduate degree program in school psychology. At least

half of the internship **must be** completed in an educational setting. This internship experience will include opportunities to demonstrate skills learned in all coursework[; and].

[(F) The Initial Student Services Certificate for Speech-Language Pathologist (Birth - Grade 12), valid for a period of four (4) years from the effective date of the certificate, will be issued to those persons meeting the following requirements:

1. Professional Requirements—

A. Possession of a master's or higher degree in Speech-Language Pathology from an accredited college or university; and

B. Possession of a valid, unencumbered, undisciplined Missouri license in Speech-Language Pathology from the Missouri Board of Registration for the Healing Arts.]

(2) The requirements of this rule shall become effective August 1, 2017/79.

AUTHORITY: [sections 168.011, 168.405, and 168.409, RSMo 2000, and] sections 161.092, **168.011**, 168.021, 168.071, 168.081, [and] 168.400, **168.405**, and **168.409**, RSMo [Supp. 2013] **2016**. Original rule filed Oct. 29, 2013, effective May 30, 2014. Amended: Filed June 22, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Department of Elementary and Secondary Education, Attention: Dr. Paul Katnik, Assistant Commissioner, Office of Educator Quality, PO Box 480, Jefferson City, MO 65102-0480 or by email to educatorquality@dese.mo.gov. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

**Title 6—DEPARTMENT OF HIGHER EDUCATION
Division 10—Commissioner of Higher Education
Chapter 2—Student Financial Assistance Program**

PROPOSED RESCISSION

6 CSR 10-2.070 Missouri Prospective Teacher Loan Program. This rule provided for the administration of the Missouri Prospective Teacher Loan Program.

PURPOSE: This rule is being rescinded as its authorizing statute was repealed.

AUTHORITY: sections 168.550–168.595, RSMo 1995. Original rule filed Jan. 11, 1986, effective June 12, 1986. Rescinded: Filed June 19, 2018.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed rescission will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rescission with Kelli

Reed, Missouri Department of Higher Education, PO Box 1469, Jefferson City, Missouri 65102-1469 or kelli.reed@dhe.mo.gov. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

**Title 6—DEPARTMENT OF HIGHER EDUCATION
Division 10—Commissioner of Higher Education
Chapter 8—Dwight D. Eisenhower Mathematics and
Science Education Act**

PROPOSED RESCISSION

6 CSR 10-8.010 General Provisions. This rule provided for the general provisions governing programs operated by institutions of higher education under the Dwight D. Eisenhower Mathematics and Science Education Act of 1988.

PURPOSE: This rule is being rescinded as the federal program that necessitated it has expired.

AUTHORITY: section 173.050, RSMo Supp. 1990. Original rule filed Jan. 3, 1992, effective May 14, 1992. Rescinded: Filed June 19, 2018.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed rescission will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rescission with Kelli Reed, Missouri Department of Higher Education, PO Box 1469, Jefferson City, Missouri 65102-1469 or kelli.reed@dhe.mo.gov. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

**Title 6—DEPARTMENT OF HIGHER EDUCATION
Division 10—Commissioner of Higher Education
Chapter 8—Dwight D. Eisenhower Mathematics and
Science Education Act**

PROPOSED RESCISSION

6 CSR 10-8.020 Administration and Operation of Program. This rule established the policies and procedures for administration of the Dwight D. Eisenhower Mathematics and Science Education Act by the Coordinating Board for Higher Education and under which institutions of higher education could apply for federal assistance under that Act.

PURPOSE: This rule is being rescinded as the federal program that necessitated it has expired.

AUTHORITY: section 173.050, RSMo Supp. 1990. Original rule filed Jan. 3, 1992, effective May 14, 1992. Rescinded: Filed June 19, 2018.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed rescission will not cost private entities

more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rescission with Kelli Reed, Missouri Department of Higher Education, PO Box 1469, Jefferson City, Missouri 65102-1469 or kelli.reed@dhe.mo.gov. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

**Title 8—DEPARTMENT OF LABOR AND
INDUSTRIAL RELATIONS
Division 30—Division of Labor Standards
Chapter 1—Organization**

PROPOSED AMENDMENT

8 CSR 30-1.010 Organization of the Division of Labor Standards. The division proposes to amend the original purpose statement of the rule.

PURPOSE: This amendment serves to reduce unnecessary restrictive language in the purpose of this regulation.

PURPOSE: This rule describes the organization of the Division of Labor Standards as [required by] *pursuant to* section 536.023, RSMo [2000] 2016.

AUTHORITY: Omnibus State Reorganization Act of 1974, section 8, paragraph 5. Original rule filed Dec. 18, 1975, effective Dec. 28, 1975. Amended: Filed Oct. 8, 2003, effective April 30, 2004. Amended: Filed June 19, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Division of Labor Standards, Attn: Matt Cowell, Director, PO Box 449, Jefferson City, MO 65102-0449. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

**Title 8—DEPARTMENT OF LABOR AND
INDUSTRIAL RELATIONS
Division 30—Division of Labor Standards
Chapter 2—Mining Rules**

PROPOSED AMENDMENT

8 CSR 30-2.010 Definitions. The division proposes to amend section (1).

PURPOSE: This amendment serves to reduce unnecessary restrictive language in section (1) of this regulation.

(1) Active workings means any place in any mine where miners [are] normally [required to] work or travel.

AUTHORITY: sections 286.060 and 293.630, RSMo [1986] 2016. Original rule filed Dec. 18, 1975, effective Dec. 28, 1975. Amended: Filed June 19, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Division of Labor Standards, Attn: Matt Cowell, Director, PO Box 449, Jefferson City, MO 65102-0449. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

**Title 8—DEPARTMENT OF LABOR AND
INDUSTRIAL RELATIONS
Division 30—Division of Labor Standards
Chapter 2—Mining Rules**

PROPOSED AMENDMENT

8 CSR 30-2.020 Standard Practices for Safety and Operation. The division proposes to amend section (1); delete sections (3), (6), (9), (20), (21), (30), (37), (40), (42), (45), (71), (72), (89), (91), (107), (112), (117), (119), (120), (138), (139), (159), (177), (180), (192), (194), (195), (222), (224), (229), (230), and (237); and renumber the remaining sections.

PURPOSE: This amendment serves to reduce unnecessary restrictive language as well as eliminate outdated and redundant requirements. This amendment also rennumbers the regulation in light of the amendments.

(1) Practices and standards acceptable to the director for the safe control of surface mine walls, including the overall slope of the mine wall, [shall] **will** be established and followed by the operator. Such standards [shall] **will** be consistent with sound engineering, the nature of the ground and the mine seams, and the insuring of safe working conditions according to the degree of slope. Mining methods shall be selected which will provide wall stability, including benching, if necessary, to obtain a safe overall slope.

[[3] *The width and height of benches shall be governed by the type of equipment to be used and the operation to be performed.*]

[[4]](3) Safe means of scaling walls shall be provided. Loose material or trees on exposed wall areas shall be removed before any other work is performed in the exposed wall area.

[[5]](4) Men shall not work under dangerous walls. Hazardous overhanging walls shall be taken down immediately and other unsafe ground conditions shall be corrected promptly, or the areas shall be barricaded or posted.

[[6] *When removing rock by hand, men shall approach loose rock and areas on walls to be scaled from above and shall scale from a safe location.*]

[[7]](5) The supervisor or a competent person designated by him/her shall examine working areas and faces of walls for unsafe conditions at least at the beginning of each shift, during the shift while men are working, and after blasting. Any unsafe conditions found shall be corrected before any further work is performed at the immediate area or face at which the unsafe condition exists.

[[8]](6) Men shall examine their working places before starting work

and frequently thereafter, and any unsafe conditions shall be reported immediately to the supervisor before any other work is performed.

[(9)] Large boulders requiring secondary blasting shall be in a safe location before they are drilled or broken.]

[(10)](7) Men shall not be permitted to work between equipment and the mine wall where the equipment may hinder escape from falls or slides of the wall, unless special safety precautions are taken in advance.

[(11)](8) No person shall smoke or use an open flame where flammable or combustible liquids or greases are stored or in areas or places where fire or explosion hazards exist.

[(12)](9) Signs warning against smoking and open flames shall be posted so they can readily be seen in areas or places where fire or explosion hazards exist.

[(13)](10) Areas surrounding flammable-liquid storage tanks and electric substations and transformers shall be kept free from grass (dry), weeds, underbrush, and other combustible materials for at least twenty-five feet (25') in all directions.

[(14)](11) Fires used for warming purposes shall be enclosed to prevent persons from coming in contact with flame or coals which would ignite clothing. Oily or easily ignited clothing shall not be worn where ignition hazards are present.

[(15)](12) Buildings or rooms in which oil, grease, flammable liquids, or similar flammable materials are stored shall be of fire-resistant construction and well ventilated. Provisions shall be made to control spilled flammable liquids.

[(16)](13) Abandoned electrical circuits shall be de-energized and isolated so that they cannot become energized inadvertently. If no further use is intended, they shall be removed.

[(17)](14) Combustible materials, grease, lubricants, or flammable liquids shall not be allowed to accumulate where they can create a fire hazard.

[(18)](15) Materials, such as oily waste and rags, which are subject to spontaneous combustion shall be placed in tightly covered metal containers until disposed of properly.

[(19)](16) When flammable solvents are used for cleaning, such solvents shall be transported in safety cans of not over five (5)-gallon capacity. When solvents are used to clean parts, the containers used shall have tight fitting covers. No cleaning may be done with flammable solvents near a possible source of ignition.

[(20)] Oxygen cylinders shall not be stored near oil or grease.

(21) Gauges and regulators used with oxygen or acetylene cylinders shall be kept clean and free of oil and grease.]

[(22)](17) Valves on oxygen and acetylene tanks shall be kept closed when they are not in use.

[(23)](18) Battery-charging stations shall be located in well ventilated areas and in the clear of other equipment.

[(24)](19) Internal combustion engines, except diesels, shall be shut off and stopped before being fueled.

[(25)](20) Each mine shall have available or be provided with, appropriate types of firefighting equipment adequate for the size of

the mine.

[(26)](21) Firefighting equipment shall be strategically located, readily accessible, plainly marked, properly maintained and inspected periodically, and records shall be kept of such inspections.

[(27)](22) Fire extinguishers shall be adequate in number and size and of the appropriate type for each particular fire hazard involved.

[(28)](23) Fire extinguishers shall be replaced immediately with fully charged extinguishers of the same capability after any discharge is made from the extinguishers.

[(29)](24) Fire extinguishers shall be inspected at least every six (6) months, tested at least once each year, and maintained according to the manufacturer's recommendation. Each extinguisher shall bear a tag showing the date of inspection and testing and the initials or name of the person making the examination.

[(30)] Fire extinguishers shall be approved by Underwriters' Laboratories, Inc. or Factory Mutual Research Corporation.]

[(31)](25) When welding or cutting near combustible materials, precautions shall be taken to insure that smoldering metal or sparks do not result in fire.

[(32)](26) Belt conveyors in locations where fire would create a hazard to personnel shall be provided with safety switches to stop the drive pulley automatically in the event the belt stalls or there is excessive slippage.

[(33)](27) Detonators and other cap sensitive high explosives shall be stored in magazines provided for that purpose.

[(34)](28) Blasting agents may be stored in van type trailers, provided that they are well ventilated, kept clean, and free of extraneous material that could create a fire hazard.

[(35)](29) Blasting agents, safety fuse, or detonating cord may be stored with explosives, but blasting agents must be kept physically separated from the fuse, detonators, and explosives.

[(36)](30) Magazines shall be—

(A) Detached structures located away from power lines, fuel storage areas, and other possible sources of fire;

(B) Constructed substantially of noncombustible material or covered with fire-resistant material;

(C) Electrically bonded and grounded if constructed of metal;

(D) Made of nonsparking materials on the inside including floors;

(E) Provided with adequate and effectively screened ventilation openings near the floor and ceiling;

(F) Kept locked securely when unattended;

(G) Used exclusively for storage of blasting agents, explosives, or detonators and kept free of all extraneous materials;

(H) Kept clean and dry in the interior and in good repair; and

(I) Unheated, unless heated in a manner that does not create a fire or explosion hazard. Electrical heating devices shall not be used inside a magazine.

[(37)] Only permissible lights worn or carried shall be used inside magazines.]

[(38)](31) Area surrounding magazines not less than twenty-five feet (25') in all directions shall be kept free of rubbish and other combustibles.

[(39)](32) Smoking and open flames shall not be permitted within twenty-five feet (25') of explosives and detonator-storage magazines.

[(40)] Cases of explosives shall be stored in such a manner to assure the use of the oldest stock first.]

[(41)](33) Ammonium nitrate-fuel oil (ANFO) mixtures shall be physically separated from dynamite stored in the same magazine and in such a manner that oil does not contaminate the dynamite.

[(42)] Cases of explosives shall not be stored on their ends or sides nor in stacks over six feet (6') high.]

[(43)](34) Explosives and detonators shall be transported in separate vehicles unless separated by four inches (4") of hardwood or the equivalent.

[(44)](35) Self-propelled vehicles used to transport explosives or detonators shall be equipped with suitable fire extinguishers and marked with proper warning signs.

[(45)] When vehicles containing explosives or detonators are parked, the brakes shall be set, the motor power shut off when not in use, and the vehicle shall be blocked securely against rolling when parked on an incline.]

[(46)](36) Vehicles containing explosives or detonators shall not be left unattended except in blasting areas where loading or charging is in progress.

[(47)](37) Vehicles containing explosives or detonators shall not be taken to a repair garage or shop for any purpose.

[(48)](38) Vehicles used to transport explosives or detonators shall be maintained in good condition and shall be operated at a safe speed and in accordance with recognized safe operating practices.

[(49)](39) Vehicles used to transport explosives other than ANFO mixtures, shall have substantially constructed bodies, no sparking metal exposed in the cargo space, and shall be equipped with suitable sides and tail gates; explosives shall not be piled higher than the side or end enclosures.

[(50)](40) Explosives shall be transported at times and over routes that expose a minimum number of persons.

[(51)](41) Other materials or supplies shall not be placed on or in the cargo space of a conveyance containing explosives or detonators.

[(52)](42) No person shall smoke while transporting or handling explosives or detonators.

[(53)](43) Only the necessary attendants shall ride on or in vehicles containing explosives or detonators.

[(54)](44) Explosives shall be transported promptly without undue delays in transit.

[(55)](45) Nonconductive containers with tight-fitting covers shall be used to transport or carry capped fuses and electric detonators to blasting sites.

[(56)](46) Substantial nonconductive closed containers shall be used to carry explosives to blasting sites.

[(57)](47) Persons who use explosives, blasting agents, or detonators shall be competent and understand the hazards involved; trainees shall do such work only under the supervision of and in the immediate presence of competent men.

[(58)](48) Blasting operations shall be under the direct control of

competent persons designated by the operator for that purpose.

[(59)](49) Damaged or deteriorated explosives, blasting agents, and detonators shall be disposed of in a safe manner and as soon as possible.

[(60)](50) Explosives or detonators shall not be taken to the face or the immediate vicinity (within twenty-five feet (25')) of the blasting site until all other work has been completed.

[(61)](51) Holes to be blasted shall be charged as near to blasting time as practical and such holes shall be blasted as soon as practicable after charging has been completed.

[(62)](52) No person shall smoke within twenty five feet (25') of explosives, blasting agents or detonators.

[(63)](53) Explosives and blasting agents shall be kept separated from detonators until charging of holes is started.

[(64)](54) Primers shall be made up at the time of charging and as close to the blasting site as conditions allow.

[(65)](55) Only wooden or other nonsparking devices shall be used to punch holes in explosives' cartridges.

[(66)](56) Tamping poles shall be blunt and squared at one (1) end and made of wood or other nonsparking material.

[(67)](57) No tamping shall be done directly on primer cartridges.

[(68)](58) Unused explosives and detonators shall be moved back to magazine as soon as charging operations are completed.

[(69)](59) Approaches to areas in which charged holes are awaiting firing shall be guarded, or barricaded and posted, or flagged against unauthorized entry. If blasting is done after dark, red flashing lights shall be used at the approaches to the blasting area.

[(70)](60) When a blast is about to be fired, ample warning shall be given to allow all persons to retreat to a safe place. Each mine shall have a definite plan of warning signals that can be clearly seen or heard by anyone in the blasting area. The operator shall inform all employees at the local mine as to the established procedure.

[(71)] When safety fuse has been used, men shall not return to misfired holes for at least thirty (30) minutes.

[(72)] When electric blasting caps have been used, men shall not return to misfired holes for at least fifteen (15) minutes.]

[(73)](61) Blasted materials shall be examined for undetonated explosives after each blast and undetonated explosives found shall be disposed of safely.

[(74)](62) Misfires shall be reported to the proper supervisor and shall be disposed of safely before any other work is performed in the blasting area.

[(75)](63) Blast holes in hot-hole areas and holes that have been sprung shall not be charged before tests have been made to insure that the heat has been dissipated to a safe level.

[(76)](64) If explosives are suspected of burning in a hole, all persons in the endangered area shall move to a safe location until the danger has passed.

[(77)](65) Holes shall not be drilled where there is danger of intersecting a charge or misfired hole.

[(78)](66) Fuse and igniters shall be stored in a cool, dry place away from oils or grease.

[(79)](67) Fuse shall not be kinked, bent sharply, or handled roughly.

[(80)](68) Fuses shall be cut and capped in safe, dry locations posted with No Smoking signs.

[(81)](69) Blasting caps shall be crimped to fuses only with devices designed for that specific purpose.

[(82)](70) Fuses less than forty-eight inches (48") long shall not be used for any purpose.

[(83)](71) At least two (2) men shall be present when lighting fuses and no man shall light more than fifteen (15) individual fuses. If more than fifteen (15) holes per man are to be fired, igniter cord and connectors or electric blasting shall be used.

[(84)](72) A safe interval of time shall be allowed to light a round and evacuate the blasting area.

[(85)](73) Fuse shall be ignited with hot-wire lighters, lead spitters, igniter cord, or other such devices designed for this purpose.

[(86)](74) Fuse shall not be ignited before the primer and the entire charge are securely in place.

[(87)](75) Electric detonators of different brands shall not be used in the same round.

[(88)](76) Electric detonators shall remain shunted until they are being wired into the blasting circuit. Lead lines and wired rounds shall be kept shunted until immediately before blasting.

[(89)] *Completely wired round shall be tested with a blasting galvanometer before connections are made to the blasting line.]*

[(90)](77) Lead wires and blasting lines shall not be strung across power conductors, pipelines, or within twenty feet (20') of bare powerlines. They shall be protected from sources of static or other electrical contact.

[(91)] *Permanent blasting lines shall be properly supported, insulated and kept in good repair.]*

[(92)](78) Charging shall be stopped immediately when the presence of static electricity or stray current is detected; the condition shall be corrected before charging is resumed.

[(93)](79) Charging of holes shall be suspended and the men withdrawn to a safe location upon the approach of an electrical storm.

[(94)](80) Safety switches and blasting switches shall be labeled, encased in boxes, and arranged so that the covers of the boxes cannot be closed with the switches in closed position.

[(95)](81) Blasting switches shall be locked in the open position, except when closed to fire the blast. Lead wires shall not be connected to the blasting switch until the shot is ready to be fired.

[(96)](82) The key to a blasting switch shall be entrusted only to the person designated to fire blast.

[(97)](83) Electrical circuits from the blasting switches to the blast area shall not be grounded.

[(98)](84) At least a five foot (5') air gap shall be provided between the blasting circuit and the power circuit.

[(99)](85) Where electric blasting is to be performed, electric circuits to equipment within twenty-five feet (25') of a hole that is to be charged with an electric blasting cap shall be de-energized before electric detonators are brought into the immediate area or the electric equipment shall be moved out of the immediate area.

[(100)](86) Power sources shall be suitable for the number of electric detonators to be fired and for the type of circuits used.

[(101)](87) When instantaneous blasting is performed, the double-trunkline or loop system shall be used in detonating cord blasting.

[(102)](88) When instantaneous blasting is performed, trunklines in multiple-row blasting, shall make one (1) or more complete loops, with crossties between loops at intervals of not over two hundred feet (200').

[(103)](89) All detonating-cord knots shall be tight and all connections shall be kept at right angles to the trunklines.

[(104)](90) Delay connectors for firing detonating cord shall be treated and handled with the same safety precautions as blasting caps and electric detonators.

[(105)](91) Detonating cord shall not be kinked, bent, or otherwise handled in such a manner that the train of detonation may be interrupted.

[(106)](92) Sensitized Ammonium Nitrate Blasting Agents.

(A) When used, the same precautions shall be taken as for high explosives.

(B) Adequate priming shall be employed to guard against misfires, increased toxic fumes, and poor performance.

(C) Where pneumatic loading is employed, before any type of blasting operations using blasting agents is put into effect, an evaluation of the potential hazard of static electricity shall be made. Adequate steps, including the grounding of the conductive parts of pneumatic loading equipment, shall be taken to eliminate the hazard of static electricity before blasting agent preparation is commenced.

(D) Pneumatic loading equipment shall not be grounded to waterlines, airlines, rails, or other permanent electrical grounding systems.

(E) Hoses used in connection with pneumatic loading machines shall be of the semiconductive type, having total resistance low enough to permit the dissipation of static electricity and high enough to limit the flow of stray electric currents to a safe level. Wirecountered hose shall not be used because of the potential hazard from stray electric currents.

(F) Plastic tubes shall not be used to protect pneumatically loaded blasting agent charges against water unless a positive grounding system is provided to drain electrostatic charges from the holes.

[(107)] *Equipment for drilling and blasting shall be inspected each shift by a competent person designated by the operator. Equipment defects affecting safety shall be reported immediately.]*

[(108)](93) Equipment defects affecting safety shall be corrected before the equipment is used.

[(109)](94) The drilling area shall be inspected by a competent person designated by the operator for hazards before drilling operations are started.

[(110)](95) Men shall not be on the mast while the drill is in operation.

[(111)](96) Drill crews and others shall stay clear of augers or drill stems that are in motion. Persons shall not pass under or step over a moving stem or auger.

[(112)] *Receptacles or racks shall be provided for drill steel stored on drills.]*

[(113)](97) Tools and other objects shall not be left loose on the mast or drill platform.

[(114)](98) When drill is being moved from one drilling area to another, drill steel, tools, and other equipment shall be secured and the mast placed in a safe position.

[(115)](99) In the event of power failure, drill controls shall be placed in the neutral position until power is restored.

[(116)](100) While in operation, drills shall be attended at all times.

[(117)] *Drill holes large enough to constitute a hazard shall be covered or guarded.]*

[(118)](101) Men shall not drill from positions that hinder their access to the control levers, or from insecure footing or staging, or from atop equipment not designed for this purpose.

[(119)] *Bit wrenches or bit knockers shall be used to remove detachable bits from drill steel.*

[(120)] *Starter steels shall be used when collaring holes with handheld or feedleg drills.]*

[(121)](102) Men shall not hold the drill steel while collaring holes or rest their hands on the chuck or centralizer while drilling.

[(122)](103) Air shall be turned off and bled from the hose before handheld drills are moved from one working area to another.

[(123)](104) Equipment used for loading, hauling, and dumping shall be inspected each shift by a competent person designated by the operator. Equipment defects affecting safety shall be reported immediately.

[(124)](105) Equipment defects affecting safety shall be corrected before the equipment is used.

[(125)](106) Powered mobile equipment shall be provided with adequate brakes.

[(126)](107) Equipment operators shall be certain, by signal or other means, that all persons are in the clear before starting or moving equipment.

[(127)](108) When the entire length of a conveyor is visible from the starting switch, the operator shall visually check to make certain that all persons are in the clear before starting the conveyor. When the entire length of the conveyor is not visible from the starting switch, a positive audible warning system shall be installed and operated to warn persons that the conveyor will be started.

[(128)](109) Trucks, shuttle cars, and front-end loaders shall be equipped with emergency brakes separate and independent of the regular braking system.

[(129)](110) Operators' cabs shall be constructed to permit operators to see without difficulty and should be reasonably comfortable.

[(130)](111) Cab windows shall be of safety glass or equivalent, in

good condition and shall be kept clean.

[(131)](112) Cabs of mobile equipment shall be kept free of extraneous materials.

[(132)](113) Adequate back stops or brakes shall be installed on inclined conveyor drive units to prevent conveyors from running in reverse if a hazard to personnel will result.

[(133)](114) No person shall be permitted to ride a power driven chain, belt, or bucket conveyor, unless specifically designed for the transportation of persons.

[(134)](115) Equipment operating speeds shall be prudent and consistent with conditions of roadway, grades, clearance, visibility, traffic, and the type of equipment used.

[(135)](116) Dust control measures shall be taken where dust significantly reduces visibility of equipment operators. Haulage roads shall be wet down as necessary unless dust is controlled adequately by other methods.

[(136)](117) Mobile equipment operators shall have full control of the equipment while it is in motion.

[(137)](118) Dippers, buckets, loading booms, or heavy suspended loads shall not be swung over the cabs of haulage vehicles until the drivers are out of the cabs and in safe locations, unless the trucks are designed specifically to protect the drivers from falling material.

[(138)] *Only authorized persons shall be present in areas of loading or dumping operations.*

[(139)] *Unless safe provisions are made for persons to mount or leave equipment while it is in operation, the operator shall be notified of their intentions before getting on or off.]*

[(140)](119) Operators shall assume the normal operating position at all times while the vehicle is in motion and shall sit facing the direction of travel while operating equipment with dual controls.

[(141)](120) Men shall not work or pass under the buckets or booms of loaders in operation.

[(142)](121) When traveling between work areas, the equipment shall be secured in the travel position.

[(143)](122) Dippers, buckets, scraper blades, and similar movable parts shall be secured or lowered to the ground when not in use.

[(144)](123) Men shall not ride in dippers, buckets, forks, clamshells, or other parts of any equipment not specifically designed for the transportation of persons.

[(145)](124) Loaded cars or trucks shall not be moved until the loads are trimmed properly.

[(146)](125) Electrically powered mobile equipment shall not be left unattended unless the master switch is in the off position, all operating controls are in the neutral position, and the brakes are set or other equivalent precautions are taken against rolling.

[(147)](126) Mobile equipment shall not be left unattended unless the brakes are set. The wheels shall be turned into a bank or wall or shall be blocked when such equipment is parked on a grade.

[(148)](127) Men shall not ride on top of loaded haulage equipment.

[(149)](128) Men shall not ride outside the cabs and beds of mobile equipment.

[(150)](129) Equipment which is to be hauled shall be properly loaded and secured.

[(151)](130) Dumping locations and haulage roads shall be kept reasonably free of water, debris, and spillage.

[(152)](131) Berms, bumper blocks, safety hooks, or similar means shall be provided to prevent overtravel and overturning at dumping locations.

[(153)](132) If truck spotters are used, they shall be well in the clear while trucks are backing into dumping position and dumping lights shall be used at night to direct trucks.

[(154)](133) When overhead clearance is restricted, warning devices shall be installed, and the restricted area shall be conspicuously marked.

[(155)](134) Ramps and dumps shall be of solid construction, of ample width, have ample side clearance and headroom, and be kept reasonably free of spillage.

[(156)](135) Lights, flares, or other warning devices shall be posted when parked equipment creates a hazard to vehicular traffic.

[(157)](136) Tires shall be deflated before repairs on them are started and adequate means shall be provided to prevent wheel-locking rims from creating a hazard during tire inflation.

[(158)](137) Any load extending more than four feet (4') beyond the rear of the vehicle body shall be marked clearly with a red flag by day and a red light by night.

[(159)] *A tow bar shall be used to tow heavy equipment. A safety chain shall be used in conjunction with the tow bar.*

[(160)](138) When heavy equipment is to be towed, the towing vehicle shall be of suitable weight and strength to maintain safe control of the load.

[(161)](139) Safe means of access shall be provided and maintained to all working places.

[(162)](140) Crossovers, elevated walkways, elevated ramps, and stairways shall be of substantial construction, provided with handrails and maintained in good condition. Where necessary, toeboards shall be provided.

[(163)](141) Ladders shall be of substantial construction, maintained in good condition, and regularly inspected.

[(164)](142) Portable straight ladders shall be provided with nonslip bases, shall be placed against a safe backing at the proper angle, and set on secure footing.

[(165)](143) Fixed ladders shall be anchored securely and installed to provide at least three inches (3") of toe clearance.

[(166)](144) Fixed ladders should have substantial railed landing at least every twenty feet (20') unless backguards are provided.

[(167)](145) Steep fixed ladders (seventy degrees to ninety degrees (70°-90°) from the horizontal) twenty feet (20') or more in length shall be provided with backguards, cages, or equivalent protection, starting at a point not more than seven feet (7') from the bottom of

the ladder.

[(168)](146) Fixed ladders shall project at least three feet (3') above landings or substantial handholds shall be provided above the landings.

[(169)](147) Wooden members of ladders shall not be painted.

[(170)](148) Ladderways, stairways, walkways, and ramps shall be kept free of loose rock and extraneous materials.

[(171)](149) Men climbing or descending ladders shall face the ladders and have both hands free for climbing.

[(172)](150) Railed walkways shall be provided wherever persons are regularly required to walk along conveyor belts. Inclined railed walkways shall be nonskid or provided with cleats.

[(173)](151) Openings above, below, or near travelways through which men or materials may fall shall be protected by railings, barriers, or covers. Where it is impractical to install such protective devices, adequate warning signals shall be posted.

[(174)](152) Scaffolds and working platforms shall be of substantial construction and provided with handrails and maintained in good condition. Floorboards shall be laid properly and the scaffolds and working platforms shall not be overloaded. Working platforms shall be provided with toeboards where necessary.

[(175)](153) Crossovers shall be provided where it is necessary to cross conveyors.

[(176)](154) Moving conveyors shall be crossed only at designated crossover points.

[(177)] *Slippery walkways shall be provided with cleats and handrails or ropes, or both.]*

[(178)](155) Regularly used walkways and travelways shall be sanded, salted, or cleared of snow and ice as soon as practicable.

[(179)](156) Electric circuits shall be protected against excessive overloads by fuses or circuit breakers of the correct type and capacity.

[(180)] *Powerlines and telephone circuits shall be protected against short circuits and lightning.]*

[(181)](157) Electric equipment and circuits shall be provided with switches or other controls. Such switches or controls shall be of approved design and construction and shall be properly installed.

[(182)](158) Individual overload protection or shortcircuit protection shall be provided for the trailing cables of mobile equipment.

[(183)](159) Power wires and cables shall have adequate current-carrying capacity and shall be protected from mechanical injury.

[(184)](160) Neither crawler-mounted nor rubber-tired equipment shall run over trailing cables, unless the cables are properly bridged or otherwise protected.

[(185)](161) Distribution boxes shall be provided with disconnect switches.

[(186)](162) Trailing cable and power-cable connections to junction boxes shall not be made or broken under load.

~~[(187)]~~**(163)** Power wires and cables shall be insulated adequately where they pass into or out of electrical compartments.

~~[(188)]~~**(164)** Power wires and cables which present a fire hazard shall be well installed on acceptable insulators.

~~[(189)]~~**(165)** Where metallic tools or equipment can come in contact with bare powerlines, the line shall be guarded or de-energized.

~~[(190)]~~**(166)** Telephone and low-potential electric signal wires shall be protected from contacting energized powerlines.

~~[(191)]~~**(167)** High-potential transmission cables shall be covered, insulated or placed according to acceptable electrical codes to prevent contact with low-potential circuits.

~~[(192)]~~ *The potential on bare signal wires accessible to personal contact should not exceed forty (40) volts.]*

~~[(193)]~~**(168)** Splices in power cables, including ground conductor, where provided, shall be—

(A) Mechanically strong with adequate electrical conductivity;

(B) Effectively insulated and sealed to exclude moisture; and

(C) Provided with mechanical protection and electrical conductivity as near as possible to that of the original.

~~[(194)]~~ *Shovel trailing cables shall not be moved with the shovel dipper unless cable slings or sleds are used.*

~~[(195)]~~ *Energized high-potential cables shall be handled with insulated hooks or tongs.]*

~~[(196)]~~**(169)** Electrical equipment shall be de-energized before work is done on such circuits unless hot line tools are used. Switches shall be locked out and suitable warning signs posted by the individuals who are to do the work; locks shall be removed only by authorized persons.

~~[(197)]~~**(170)** Principal power switches shall be labeled to show which units they control, unless identification can be made readily by location.

~~[(198)]~~**(171)** At least three feet (3') of clearance shall be provided around all parts of stationary electric equipment or switchgear where access or travel is necessary.

~~[(199)]~~**(172)** Suitable danger signs shall be posted at all major electrical installations.

~~[(200)]~~**(173)** Areas containing major electrical installations shall be entered only by authorized personnel.

~~[(201)]~~**(174)** Electrical connections and resistor grids that are difficult or impractical to insulate shall be guarded, unless protection is provided by location.

~~[(202)]~~**(175)** Reverse-current protection shall be provided at storage battery charging stations.

~~[(203)]~~**(176)** All metal enclosing or encasing electrical circuits shall be grounded or provided with equivalent protection. (This requirement does not apply to battery-operated equipment.)

~~[(204)]~~**(177)** Metal fencing and metal buildings enclosing transformers and switchgear shall be grounded.

~~[(205)]~~**(178)** Frame grounding or equivalent protection shall be provided for mobile equipment powered through trailing cables.

~~[(206)]~~**(179)** Continuity and resistance or grounding systems shall be tested immediately after installation.

~~[(207)]~~**(180)** Electric equipment and wiring shall be inspected by a competent person as often as necessary to assure safe operating conditions.

~~[(208)]~~**(181)** When a potentially dangerous condition is found, it shall be corrected before equipment or wiring is energized.

~~[(209)]~~**(182)** Inspection and cover plates on electrical equipment shall be kept in place at all times, except during testing or repairs.

~~[(210)]~~**(183)** Circuits shall be de-energized before fuses are removed in medium or high voltage circuits.

~~[(211)]~~**(184)** Fuse tongs or hot line tools shall be used when fuses are removed in medium or high voltage circuits.

~~[(212)]~~**(185)** Trailing cables shall be clamped to machines in a manner to protect the cables from damage and to prevent strain on the electrical connections.

~~[(213)]~~**(186)** Surplus trailing cables to shovels, cranes, and similar equipment shall be stored in cable boots or on reels mounted on the equipment or otherwise protected from mechanical damage.

~~[(214)]~~**(187)** Operating controls shall be installed so that they can be operated without danger of contact with energized conductors.

~~[(215)]~~**(188)** Equipment with booms or masts which are not properly protected shall not be operated where the booms or masts can come within ten feet (10') of an energized overhead powerline.

~~[(216)]~~**(189)** Overhead high-potential powerlines shall be installed as specified by the *National Electrical Safety Code*.

~~[(217)]~~**(190)** When equipment must be moved under energized powerlines and the clearance is less than ten feet (10'), the powerlines shall be deenergized or other precautions shall be taken.

~~[(218)]~~**(191)** Guy wires from poles supporting high voltage transmission lines shall be securely connected to the system ground or be provided with insulators installed near the pole end.

~~[(219)]~~**(192)** Telegraph, telephone, or signal wires shall not be installed on the same crossarm with power conductors. When carried on poles supporting power lines, they shall be installed as specified by the *National Electrical Safety Code*.

~~[(220)]~~**(193)** Transformers shall be totally enclosed or shall be placed at least fifteen feet (15') above the ground, or installed in a transformer house or surrounded by a substantial fence at least six feet (6') high and at least three feet (3') from any energized parts, casings, or wiring.

~~[(221)]~~**(194)** Transformer enclosures shall be kept locked against unauthorized entry.

~~[(222)]~~ *Tools and supplies shall be carried in the hands and not on the shoulders when men travel near bare power conductors.]*

~~[(223)]~~**(195)** Unguarded conveyors with walkways shall be equipped with emergency stop devices or cords along their full length.

~~[(224)]~~**(196)** Use of Equipment—Guards.

(A) Gears, sprockets, chains, drive, head, tail; and take-up pulleys, flywheels, couplings, shafts, sawblades, fan inlets; and similar

exposed moving machine parts which may cause injury to persons shall be guarded.

(B) Overhead belts shall be guarded if the whipping action from a broken belt would be hazardous to persons below.

(C) Guards at conveyor drive, head, and tail pulleys shall be sufficient to prevent a person from reaching behind the guard and becoming caught between the belt and the pulley.

(D) Protruding set screws on revolving parts shall be guarded.

(E) Except when testing the machinery, guards shall be securely in place while machinery is being operated.

(F) Guards shall be sufficiently strong and maintained to provide the required protection.

[(G) Stationary grinding machines other than special bit grinders shall be equipped with—

1. Peripheral hoods (less than ninety degrees (90°) throat openings) capable of withstanding the force of a bursting wheel;

2. Adjustable tool rests set as close as practical to the wheel; and

3. Safety washers.]

[(H)](G) Face shields or goggles, in good condition, shall be worn when operating a grinding wheel.

[(I)](H) Handheld power tools, other than rock drills, shall be equipped with controls requiring constant hand or finger pressure to operate the tools or shall be equipped with friction or other equivalent safety devices.

[(J)](I) Guards or shields shall be provided in areas where flying or falling materials present a hazard.

[(K)](J) Vehicles such as forklifts, trucks, front-end loaders, and bulldozers shall be provided with roll bar protection when necessary to protect the operator.

[(L)](K) Forklift trucks, front-end loaders, and bulldozers shall be provided with substantial canopies when necessary to protect the operator against falling material.

[(M)](L) Unsafe equipment or machinery shall be removed from service immediately.

[(N)](M) Machinery and equipment shall be operated only by authorized and experienced persons.

[(O)](N) Repairs or maintenance shall not be performed on machinery until the power is off and the machinery is blocked against motion, except where machinery motion is necessary to make adjustment or where non-energized components of large machinery can be safely repaired while the machine is operating.

[(P)](O) Men shall not work on mobile equipment in a raised position until it has been blocked in place securely. This does not preclude the use of equipment specifically designed, such as elevated mobile work platforms.

[(Q)](P) Drive belts shall not be shifted while in motion unless the machines are provided with mechanical shifters.]

[(R)](Q) Belts, chains, and ropes shall not be guided onto power driven moving pulleys, sprockets, or drums with the hands except on slow moving equipment especially designed for hand feeding.

[(S)](R) Pulleys or conveyors shall not be cleaned manually while the conveyor is in motion.

[(T)](S) Belt dressing shall not be applied manually while belts are in motion unless an aerosol-type dressing is used.

[(U)](T) Machinery shall not be lubricated while in motion where a hazard exists, unless equipped with extended fittings or cups.

[(V)](U) (T) Compressed and liquid gas cylinders shall be secured in a safe manner.

[(225)](197) Adequate first-aid materials, including stretchers and blankets, shall be provided at places convenient to all working areas. Water or neutralizing agents shall be available where corrosive chemicals or other harmful substances are stored, handled, or used.

[(226)](198) Safety belts and lines shall be worn when men work where there is danger of falling; a second person shall tend the life-line when bins, tanks, or other dangerous areas are entered.

[(227)](199) Life jackets or belts shall be worn where there is danger of falling into deep water.

[(228)](200) Protective clothing, rubber gloves, goggles, or face shields shall be worn by persons handling substances that are corrosive, toxic, or injurious to the skin.

[(229) Snug-fitting clothing shall be worn by persons working around moving equipment and machinery.

(230) Protective gloves shall be worn by employees handling materials which may cause injury.]

[(231)](201) Gloves shall not be worn where they could create a hazard by becoming entwined or caught in moving parts of machinery.

[(232)](202) Effective hearing protection shall be worn where noise levels may cause permanent ear damage or hearing loss, or noise shall be reduced to safe levels, unless the wearing of the protective devices would create a greater danger to the employee.

[(233)](203) Each place of work shall be visited by a supervisor or a competent person at the beginning of, and at least once each shift and more frequently as necessary to ensure that work is being done in a safe manner.

[(234)](204) No employee shall be assigned or allowed, or be required to perform work alone in any area where hazardous conditions exist that would endanger his/her safety unless s/he can communicate with others, can be heard, or can be seen.

[(235)](205) When work is performed after dark, the area of drilling, blasting, stripping, and loading shall be properly illuminated.

[(236)](206) An authorized competent person shall be in charge, at all times, when men are working.

[(237) Arrangement shall be made in advance for obtaining emergency medical assistance and transportation for injured persons.]

AUTHORITY: sections 286.060 and 293.630, RSMo [1986] 2016. Original rule filed Dec. 18, 1975, effective Dec. 28, 1975. Amended: Filed June 19, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Division of Labor Standards, Attn: Matt Cowell, Director, PO Box 449, Jefferson City, MO 65102-0449. To be considered, comments must be received within thirty (30) days after publication of this notice in the Missouri Register. No public hearing is scheduled.

Title 8—DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS
Division 30—Division of Labor Standards
Chapter 3—Prevailing Wage Law Rules

PROPOSED AMENDMENT

8 CSR 30-3.010 Prevailing Wage Rates for Public Works Projects.

The division proposes to amend sections (4), (6), and (7); delete sections (1), (3), and (5); and renumber the remaining sections.

PURPOSE: This amendment serves to reduce unnecessary restrictive language as well as eliminate outdated and redundant requirements. This amendment also rennumbers the regulation in light of the amendments.

[(1) All public bodies of Missouri contemplating construction work must obtain from the department an annual wage order which sets forth the prevailing hourly rate of wages in the locality. The rates so determined shall be incorporated in the contract specifications and made a part of those specifications, except that construction contracts of the State Highway and Transportation Commission need not list specific wage rates to apply, but may refer to the wage rates contained in the appropriate General Wage Orders issued by the department, as applicable.]

[(2)](1) Request for annual wage orders shall be initiated at least ten (10) calendar days before advertisement of the specifications for the contract for which the determination is sought. An exception from this provision will be made by the department only upon a proper showing of extenuating circumstances. The department has prepared and printed Form No. PW-3 for use in making a request. The form may be secured by writing Division of Labor Standards, PO Box 449, Jefferson City, MO 65102.

[(3) A project notification form PW-2 must be filed for each separate project by the public body, except the State Highways and Transportation Commission, which will be furnished prevailing wage determinations under General Wage Orders.]

[(4)](2) The annual wage order issued by the department contains the current wage rates prevailing in the locality at the time the annual wage order is issued. Hours worked during the calendar year are used to set the prevailing wage rates in the annual wage order issued in March of the following year. The department will consider hours submitted for use in its initial determination of the prevailing wage rates to be included in a particular year's wage order only if those hours are received by it, by either paper submission or in electronic format, no later than January 31 of that year. Section 290.262.9, RSMo, provides that the annual wage order for a particular occupational title may be altered once each year with an incremental increase. A public body shall specify in the call for bids for each contract the prevailing hourly rate of wages in the locality for each type of worker as set forth in the annual wage order or any replacement page(s) identifying the annual incremental increase issued by the department. The wage rates attached to, and made a part of, the call for bids for a contract [shall] will remain in effect for the duration of that particular contract.

[(5) It should be understood by all interested parties that the certified prevailing wage rates determined by the department are minimum wage rates. The contractor may not pay less than the prevailing wage rates determined by the department for the project or contract awarded to him/her as set forth in the proposal on which s/he submitted his/her bid. Employees are free to bargain for a higher rate of pay and employers are free to pay a higher rate of pay.]

[(6)](3) [Each month the successful bid contractors shall submit certified copies of their current payrolls to the contracting public body.] The public body, upon receipt of the payrolls on a project, shall keep the payrolls on file for a period of one (1) year from the date of submission of the final payrolls by the contractor. The payroll records shall set out accurately and completely the following: name and address of each worker, the class or type of worker,

rate of pay, daily and weekly number of hours worked for each class or type of work performed, deduction made, and actual wages paid for each class or type of work performed by each worker. [The payroll records shall be available at all times for inspection by authorized representatives of the Department of Labor and Industrial Relations.]

[(7)](4) The public body shall make examinations of the payrolls and other records of each contractor or subcontractor as may be necessary to assure compliance with the provisions of the law. In connection with those examinations, particular attention should be given to the correctness of classifications and any disproportionate employment of any workers. The examinations shall be of a frequency that may be necessary to assure conformity with the provisions of the law. An examination shall be made after the project has been substantially completed, but prior to, the acceptance of the affidavit as required by section 290.290, RSMo. [If any violation of sections 290.210–290.580, RSMo, is discovered by the inspecting public body, it is their duty under section 290.250, RSMo, to withhold and retain from payments to the contractor all sums and amounts due and owing as a result of any violation. Any violation shall be immediately reported to the Division of Labor Standards at PO Box 449, Jefferson City, MO 65102 or by telephone.]

AUTHORITY: section 290.240.2, RSMo [2000] 2016. Original rule filed Dec. 18, 1975, effective Dec. 28, 1975. For intervening history, please consult the Code of State Regulations. Amended: Filed June 19, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Division of Labor Standards, Attn: Matt Cowell, Director, PO Box 449, Jefferson City, MO 65102-0449. To be considered, comments must be received within thirty (30) days after publication of this notice in the Missouri Register. No public hearing is scheduled.

Title 8—DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS

Division 30—Division of Labor Standards

Chapter 3—Prevailing Wage Law Rules

PROPOSED AMENDMENT

8 CSR 30-3.020 Definitions. The division proposes to amend section (2).

PURPOSE: This amendment serves to eliminate outdated requirements.

(2) The term site of the building or construction job means the physical place(s) where the public works are to be constructed, and also means other adjacent or nearby property used by the contractor or subcontractor in that construction which can reasonably be said to be included in the site. Except as otherwise provided in this section, fabrication plants, mobile factories, batch plants, borrow pits, job headquarters, tool yards and the like, are part of the site of the building or construction job provided they are dedicated in a substantial degree to the performance of the public works project, and are so located in proximity to the actual construction location that it would be reasonable to include them. *[The dedication of seventy-five percent*

(75%) or more of the output of a fabrication plant, batch plant and the like, to the public works project raises a rebuttable presumption that the facility is part of the site of the building or construction job.] The presumption may be rebutted by evidence showing that the facility was established for other legitimate commercial purposes that make the facility useful well after the public works project has been completed. Not included in the site of the building or construction job are permanent home offices, branch plant establishments, fabrication plants, and tool yards of a contractor or subcontractor whose location and continuance in operation are determined wholly without regard to a particular public works project. In addition, fabrication plants, batch plants, borrow pits, job headquarters, tool yards, and the like, of a commercial supplier or materialman which are established by a supplier of materials for the project before opening of bids and not on the project site are not included in the site of the building or construction job. The permanent, previously established facilities are not a part of the site of the building or construction job, even where the operations for a period of time may be dedicated exclusively, or nearly so, to the performance of a public works project.

AUTHORITY: section 290.240, RSMo [1994] 2016. Original rule filed Aug. 24, 1990, effective April 29, 1991. Amended: Filed July 17, 1995, effective Jan. 30, 1996. Amended: Filed June 19, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Division of Labor Standards, Attn: Matt Cowell, Director, PO Box 449, Jefferson City, MO 65102-0449. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

Title 8—DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS

Division 30—Division of Labor Standards

Chapter 3—Prevailing Wage Law Rules

PROPOSED AMENDMENT

8 CSR 30-3.030 Apprentices and Trainees. The division proposes to delete sections (2), (3), and (4).

PURPOSE: This amendment serves to reduce unnecessary restrictive language as well as eliminate outdated and redundant requirements.

[(2) Apprentices shall be permitted to work at less than the predetermined rate for the class or type of work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the United States Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training. The allowable ratio of apprenticeship to journeymen on the site of the construction for any class or type of workers shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on the payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in this rule, shall be paid not less than the applicable wage rate on the wage determination for the class or type of work actually performed. In addition, those apprentices perform-

ing work on the site of the construction who are in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the class or type of work actually performed. Every apprentice shall be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate for the class or type of worker specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices shall be paid the full amount of fringe benefits listed on the wage determination for the applicable class or type of work performed. In the event the Bureau of Apprenticeship and Training withdraws approval of an apprenticeship program, the contractor shall no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the class or type of work performed until an acceptable program is approved.

(3) Trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the United States Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed in the annual wage order for the applicable class or type of work performed. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate in the annual wage order for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(4) Workers employed on federal-aid highway construction projects may be paid at an apprentice or trainee rate of pay if enrolled in an apprenticeship or skill training program which has been certified by the Secretary of the United States Department of Transportation pursuant to 23 U.S.C. 113. In the event the Secretary of Transportation withdraws approval of a program, the contractor will no longer be permitted to pay workers less than the applicable predetermined rate for the work performed until an acceptable program is approved.]

AUTHORITY: section 290.240, RSMo [1994] 2016. Original rule filed Aug. 24, 1990, effective April 29, 1991. Amended: Filed July 17, 1995, effective Jan. 30, 1996. Amended: Filed June 19, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500)

in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Division of Labor Standards, Attn: Matt Cowell, Director, PO Box 449, Jefferson City, MO 65102-0449. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

**Title 8—DEPARTMENT OF LABOR AND
INDUSTRIAL RELATIONS
Division 30—Division of Labor Standards
Chapter 3—Prevailing Wage Law Rules**

PROPOSED AMENDMENT

8 CSR 30-3.040 Classifications of Construction Work. The division proposes to amend sections (1), (2), and (3).

PURPOSE: This amendment serves to reduce unnecessary restrictive language as well as eliminate outdated and redundant requirements.

(1) All public works construction, for which the prevailing hourly rate of wages of workers are to be determined, *[shall]* **will** be classified as either—

(2) Building construction *[shall]* means the following:

(F) Storm and sanitary sewers inside the building and to the *[curb]* **property** line;

(G) Work in connection with telephone, electrical, water, oil, gas or fuel lines, or other utility or communication lines inside a building and to the *[curb]* **property** line;

(N) Work on water and wastewater treatment plants within the *[fence]* **property** line.

(3) Highway and heavy construction *[shall]* means the following:

(G) Work in connection with telephone, electrical, water, oil, gas or fuel lines, or any other utility or communication lines from the *[curb]* **property** line;

AUTHORITY: section 290.240, RSMo [1994] 2016. Original rule filed Aug. 24, 1990, effective April 29, 1991. Amended: Filed July 17, 1995, effective Jan. 30, 1996. Amended: Filed June 19, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Division of Labor Standards, Attn: Matt Cowell, Director, PO Box 449, Jefferson City, MO 65102-0449. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

**Title 8—DEPARTMENT OF LABOR AND
INDUSTRIAL RELATIONS
Division 30—Division of Labor Standards
Chapter 3—Prevailing Wage Law Rules**

PROPOSED RESCISSION

8 CSR 30-3.050 Posting of Prevailing Wage Rates. This rule set forth the requirements for the posting of prevailing wage rates on public works projects subject to the Prevailing Wage Law.

PURPOSE: This rescission serves to eliminate an unnecessary requirement to post prevailing wages.

AUTHORITY: section 290.240, RSMo 1986. Original rule filed Aug. 24, 1990, effective April 29, 1991. Rescinded: Filed June 19, 2018.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed rescission will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rescission with the Division of Labor Standards, Attn: Matt Cowell, Director, PO Box 449, Jefferson City, MO 65102-0449. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

**Title 8—DEPARTMENT OF LABOR AND
INDUSTRIAL RELATIONS
Division 30—Division of Labor Standards
Chapter 3—Prevailing Wage Law Rules**

PROPOSED AMENDMENT

8 CSR 30-3.060 Occupational Titles of Work Descriptions. The division proposes to amend the purpose and sections (2), (3), (4), and (6); and subsections (8)(A), (8)(C), (8)(G), (8)(M), and (8)(X).

PURPOSE: This amendment serves to reduce unnecessary restrictive language in the purpose of the rule, as well as the rule itself.

PURPOSE: [The Department of Labor and Industrial Relations is required to determine the prevailing hourly rate of wages to be paid to each worker engaged in construction on a public works project, relative to the type of work performed by each worker.] This rule describes by occupational title the type of work performed in the construction of a public works project in Missouri and sets forth the procedures to be followed in identifying each occupational title utilized on a public works project.

(2) Each occupational title of work description *[shall]* **will** be based upon the particular nature of the work performed, with consideration given to those trades, occupations, or work generally considered within the construction industry as constituting a distinct classification of work. In determining occupational titles and scope of work definitions, the department *[shall]* **will** consider the following:

(3) Any person wishing to add, delete, or modify an occupational title of work description shall submit to the director of the Division of Labor Standards a written request containing the proposed changes[. *Proposals shall contain*] **and** the following information:

(4) Interested parties who wish to submit wage information to be used in establishing the prevailing hourly rate of wages for a particular class or type of work are required to identify the work according to the applicable occupational title of work description set forth in this rule. Hours of work reported to the department *[shall]* **will** not be used to establish the prevailing hourly rate of wages if the party submitting the hours of work fails to identify the work under one (1) of the occupational titles recognized by this rule.

(6) The occupational titles and work descriptions for each type or class of work contained herein are valid throughout the entire state of Missouri. Through an objection to a wage order, an interested party may assert that any given description of work, as stated within this rule, does not apply to a specific occupational title(s) and that a different work description should apply to that occupational title(s). The interested party *[shall have]* has the burden of proving by a preponderance of the evidence the inapplicability of the description of work within that particular occupational title, but *[shall]* will be afforded the opportunity to do so in a hearing on an objection to the wage order before the Labor and Industrial Relations Commission.

(8) The occupational titles of work descriptions set forth here are as follows:

(A) Asbestos Worker/Heat and Frost Insulator—Applies to workers who apply insulation materials to mechanical systems to reduce loss or absorption of heat, prevent moisture condensation, and to deaden sound and prevent vibration. The workers remove all insulation materials from mechanical systems unless the mechanical system is being scrapped. The work falling within this occupational title of work description includes:

1. The preparation, including the building of enclosures and hanging polyurethane, and physical distribution on the job site of asbestos, cork, plastic, magnesia or similar materials, or other materials used as a substitute, and used as thermal insulation. The manufacture, fabrication, assembling, molding, handling, erection, spraying, pouring, making, hanging, application, adjusting, alteration, repairing, dismantling, reconditioning, corrosion control and testing of heat or frost insulation, such as asbestos, cork, mineral wall, infusorial earth, mercerized silk, flax, fiber, fire felt, asbestos paper, asbestos curtain, asbestos millboard, fibrous glass, foam glass, styrofoam, polyurethane, polystyrene, metals, plastics, fibrous matter, roving and resins, and the erection of scaffolding up to fourteen feet (14'), working platform;

2. The covering, including encapsulation, of boilers, tanks, refrigeration units, evaporators, turbines, fittings, valves, ducts, flues, vats, equipment, hot and cold pipes or any other hot or cold surfaces with the insulation materials listed in this rule, used for the purpose of thermal insulation, fire stoppage, fireproofing, radiator protection, sound deadeners, and the lagging (covering) on piping; and

3. The removal of all insulation materials from mechanical systems, unless the mechanical system is being scrapped, whether they contain asbestos or not (pipes, boilers, ducts, flues, breechings). All cleanup required in connection with this work, *[shall]* include the sealing, labeling, and dropping of scrap material into the appropriate containers. (After drop, final disposal is considered to be the class or type of work falling within the occupational title of work description for second semiskilled laborer.);

(C) Bricklayers and Stone Mason—Applies to workers who prepare, lay, set, bed, point, patch, grout, caulk, cut, fit, plumb, align, level, anchor, bolt, or weld brick, stone masonry, precast aggregate panels, and all types of artificial or imitation masonry. Also, the workers install expansion joint materials in brick, stone masonry, precast aggregate panels, and all types of artificial or imitation masonry. The work falling within this occupational title of work description includes:

1. The unloading of brick, stone masonry, precast aggregate panels, and all types of artificial or imitation masonry where power equipment and rigging are *[required]* necessary;

2. The masonry paving and rip-rapping of all types, with or without mortar;

3. The reinforcing of masonry, including placing, tying, and setting of rods;

4. The application of insulation systems and materials, and air and/or vapor barrier systems and materials, by spray, trowel, roller, adhesive, or mechanically fastened in or to all masonry walls;

5. The caulking of abutting masonry openings in masonry walls,

expansion joints, and false joints in all types of masonry;

6. The waterproofing of all types of masonry, which *[shall]* include installation and application of air and/or vapor barrier systems and materials by spray, trowel, roller, adhesive, or mechanically fastened; and

7. The cleaning, tuckpointing, sandblasting, steam cleaning, and Guniting work on all types of masonry;

(G) Electrician—Encompasses two (2) subclassifications as follows, Inside Wireman and Outside-Line Construction/Lineman:

1. Inside wireman—Applies to workers who are responsible for installation, assembly, construction, inspection, operation, and repair of all electrical work within the property lines of any given property (manufacturing plants, commercial buildings, schools, hospitals, power plants, parking lots). This scope of work shall begin at the secondary site of the transformer when the transformer is furnished by the local utility and the service conductors are installed underground. When service conductors are installed overhead in open air from wooden poles, this scope of work shall start immediately after the first point of attachment to the buildings or structures. The work falling within this occupational title of work description includes:

- A. Planning and layout of electrical systems that provide power and lighting in all structures. This includes cathodic protection systems utilized to protect structural steel in buildings and parking structures;

- B. All handling, moving, loading, and unloading of any electrical materials, materials used in association with an electrical system, electrical equipment, and electrical apparatus on the job site, whether by hand or where power equipment and rigging are required;

- C. Welding, burning, brazing, bending, drilling, and shaping of all copper, silver, aluminum, angle iron, and brackets to be used in connection with the installation and erection of electrical wiring and equipment;

- D. Measuring, cutting, bending, threading, forming, assembling, and installing of all electrical raceways (conduit, wireways, cable trays), using tools, such as hacksaw, pipe threader, power saw, and conduit bender;

- E. Installing wire in raceways (conduit, wireways, troughs, cable trays). This wire may be service conductors, feeder wiring, subfeeder wiring, branch circuit wiring;

- F. Chasing and channeling necessary to complete any electrical work, including the fabrication and installation of duct banks and manholes incidental to electrical, electronic, data, fiber optic, and telecommunication installation;

- G. Splicing wires by stripping insulation from terminal leads with knife or pliers, twisting or soldering wires together, and applying tape or terminal caps;

- H. Installing and modifying of lighting fixtures. This includes athletic field lighting when installed on stadium structures or supports other than wooden poles, or both;

- I. Installing and modifying of all electrical/fiber optic equipment (AC-DC motors, variable frequency drives, transformers, reactors, capacitors, motor generators, emergency generators, UPS equipment, data processing systems, and annunciator systems where sound is not a part thereof);

- J. Installing of raceway systems utilizing conduit, conduit bodies, junction boxes, and device boxes for switches and receptacles. This also may include wiring systems utilizing other methods and materials approved by the *National Electrical Code* (MC cable, AC cable, BX, or flexible metal tubing or electrical nonmetallic tubing);

- K. Installing of main service equipment, distribution panels, subpanels, branch circuit panels, motor starters, disconnect switches, and all other related items;

- L. Installing and wiring of instrumentation and control devices as they pertain to heating, ventilating, air conditioning (HVAC) temperature control and energy management systems, building automation systems, and electrically or fiber optic operated

fire/smoke detection systems where other building functions or systems are controlled;

M. Installing conduit or other raceway greater than ten feet (10') when used for the following: fire alarm systems, security systems, sound systems, closed circuit television systems or cable television systems, or any system requiring mechanical protection or metallic shielding (telephone systems);

N. Testing continuity of circuit to insure electrical compatibility and safety of components. This includes installation, inspecting, and testing of all grounding systems including those systems designed for lighting protection; and

O. Removing electrical systems, fixtures, conduit, wiring, equipment, equipment supports, or materials involved in the transmission and distribution of electricity within the parameters of the building property line if reuse of any of the existing electrical system is required. This may include the demolition and removal and disposal of the electrical system;

2. Outside-line construction/lineman—Applies to workers who erect and repair transmission poles (whether built of wood, metal, or other material), fabricated metal transmission towers, outdoor substations, switch racks, or similar electrical structures, electric cables, and related auxiliary equipment for high-voltage transmission and distribution powerlines used to conduct energy between generating stations, substations, and consumers. The work (overhead and underground) falling within this occupational title of work description includes:

A. Construction, repair, or dismantling of all overhead and underground electrical installations. The handling and operation of all equipment used to transport men, tools, and materials to and from the job site. The framing, trenching, digging, and backfilling of vaults, holes and poles, and anchors (by hand or mechanical equipment), guying, fastening to the stub-in on concrete footings or pads, assembling of the grillage, grounding of all structures, stringing overhead wire, installing underground wire, splicing, and installation of transformers;

B. Construction and repair of highway and street lighting and traffic signal systems, cathodic protection systems, and ball field lighting systems;

C. Lineman operator—Operates equipment used on the outside line portion of a project. The lineman operator assists linemen in the performance of their work, but does not climb or work out of any type of aerial lift equipment. The lineman operator does not perform any work that requires the use of hand tools;

D. Groundman—Work performed on the ground to assist the journeymen outside-line construction/lineman on work not energized. Groundmen use jack hammers, air drills, shovels, picks, tamps, trenching equipment, and other such tools for excavating and/or compacting dirt or rock on the outside line portion of a project but do not use hand tools;

E. Lineman tree trimmer—Trimming and removal of trees, stumps, limbs, brush, and other related tasks in and around electrical systems by use of chain saws, pruners, pole saws, and hand saws only when specifically required to provide clearance and right-of-way preparation for installation of overhead or underground high-voltage electric utility lines, and excluding the clearance of right-of-ways related to heavy-highway construction or other public projects not directly related to the installation of electrical utility lines. Lineman tree trimmer work may be performed on the ground and in the air; and

F. Groundman tree trimmer—Assists the lineman tree trimmer in the performance of their work using rakes, chain saws, chippers, and industrial mowers in and around electrical systems only when specifically required to provide clearance and right-of-way preparation for installation of overhead or underground high-voltage electric utility lines, and excluding the clearance of right-of-ways related to heavy-highway construction or other public projects not directly related to the installation of electrical utility lines. Groundman tree trimmer work is only performed on the ground; and

3. The occupational title of electrician may include in a particular wage determination the subclassifications of lineman operator, groundman, lineman tree trimmer, groundman tree trimmer, or any combination of these, pursuant to section (6). The description of work and corresponding wage rates *[shall]* will be established pursuant to the proceedings set forth in section (6);

(M) Linoleum Layer and Cutter—Applies to workers who measure, cut, sew, make-up and seam, tape, fit, lay, and install and seal and wax materials to be cemented, tacked or otherwise applied to its base, wherever it may be. These materials may be used as shock-absorbing, sound-absorbing or decorative coverings. With the exception of terrazzo, magnesite and latex built-up floors, the materials include oil cloth, matting, linen, carpet, synthetic turf, linoleum, vinyl, plastic, rubber, cork, mastic, asphalt, mastipave, tile, wood tile, interlocking and magnetic tile, chalk and bulletin board, nonslip or abrasive materials, resilient, decorative seamless surface coatings, monolithic coverings (monolithic *[shall]* means all resilient seamless material such as epoxy, polyethylene, plastics and their derivatives, components, and systems) and all other resilient coverings on floors, walls, counters, table tops, and ceilings. The work falling within the occupational title of work description includes:

1. The handling of materials at the point of installation;

2. The performing of all necessary preparation and finish work, such as sweeping, scraping, sanding, or chipping dirt and irregularities from base surfaces and filling cracks with putty, plaster, or cement grout to form smooth, clean foundations, drilling holes for sockets and pins;

3. The installing of underlayment, sanding and filling, fitting of metal edgings, metal corners and caps, and fitting devices for attachment of these materials;

4. The spreading of adhesive cement over floor to cement foundation material to the floor;

5. The laying of covering on cement; and

6. The rolling of finished floor to smooth it out and press cement into base and covering;

(X) Terrazzo and Marble Occupational Titles—This subsection sets forth work descriptions for three (3) occupational titles related to terrazzo and marble work.

1. Terrazzo Worker-Marble Mason— The work falling within the occupational title of work description for Terrazzo Worker-Marble Mason includes:

A. The installing of marble, mosaic, venetian enamel, and terrazzo; the cutting and assembling of mosaics and art ceramics; the casting of all terrazzo on the job site; all rolling of terrazzo work;

B. The preparing, cutting, layering, or setting of metal, composition or wooden strips and grounds on all bedding above concrete floors or walls; and the laying and cutting of metal, strips, lath, or other reinforcement, where used in terrazzo work;

C. The installing of cement terrazzo, magnesite terrazzo, dex-o-tex terrazzo, epoxy matrix terrazzo, exposed aggregate. Rustic or rough wash of exterior or interior of buildings. The mixing or applying of any other kind of mixtures of plastics composed of chips or granules of marble, granite, blue stone, enamel, mother of pearl, quartz ceramic colored quartz, and all other kinds of chips or granules when mixed with cement, rubber, neoprene, vinyl, magnesium chloride, or any other resinous or chemical substances used for seamless flooring systems. The applying of binding materials when used on walls, floors, ceilings, stairs, saddles, or any other part of the interior or exterior of the building, or other work not considered a part of the building such as fountains, swimming pools;

D. The finishing of cement floors where additional aggregate of stone is added by spreading or sprinkling on top of the finished base and troweled or rolled into the finish and then the surface ground by grinding machines (When no additional stone aggregate is added to the finished mixture, even though the surface may be ground, the work falls within the occupational title of work description for cement masons.); and

E. The carving, cutting, and setting of all marble, slate,

including slate backboards, stone, albeeren, carrara, sanionyx, vitrolite and similar opaque glass, scagliola, marbleitic and all artificial, imitation or case marble of whatever thickness or dimension. This *[shall]* will apply to all interior work, such as sanitary, decorative and other purposes inside of buildings of every description wherever required, including all polish, honed, or sand finish;

2. Marble Finisher—The work falling within the occupational title of work description for Marble Finisher includes:

A. The preparation of floors, and/or walls by scraping, sweeping, grinding, and related methods to prepare surface for Marble Mason installation of construction materials on floor and/or walls; the movement of marble installation materials, tools, machines, and work devices to work areas; the erection of scaffolding and related installation structures;

B. The movement of marble slabs for installation; the drilling of holes and the chiseling of channels in edges of marble slabs to install wall anchors, using power drill and chisel; the securing of marble anchors to studding, using and covering ends of anchors with plaster to secure anchors in place;

C. The supply and mixture of construction materials for Marble Mason; the mixture of grout, as required, following standard formulas and using manual or machine mixing methods; the application of grout to installed marble; the movement of mixed mortar or plaster to installation area, manually or using wheelbarrow;

D. The removal of excess grout, using wet sponge; the cleaning of installed marble surfaces, work and storage areas, installation tools, machinery, and work aids, using water and cleaning agents;

E. The modification of mixing, material moving, grouting, polishing, and cleaning metal pieces, using a torch, spatula, and heat sensitive adhesive and filler;

F. The removal of marble installation materials and related debris from immediate work area; the storing of marble, installation material tools, machines, and related items; and

G. The provision of assistance to Marble Mason with the following tasks: bending or forming of wire to form metal anchors, using pliers; inserting anchors into holes of marble slab; securing anchors in place with wooden stakes and plaster; selecting marble slab for installation following numbered sequences or drawings; grinding and polishing marble, using abrasives, chemical and/or manual, in machine grinding and/or polishing techniques, under Marble Mason's direction; the moving and positioning of marble;

3. Terrazzo Finisher—The work falling within the occupational title of work description for Terrazzo Finisher includes:

A. The preparation of floors, and/or walls by scraping, sweeping, grinding, and related methods to prepare surface for Terrazzo Worker installation of construction materials on floors, base and/or walls; the moving of terrazzo installation materials, tools, machines, and work devices to area, manually or using wheelbarrow;

B. The supply and mixture of construction materials for Terrazzo Worker; the preparation, mixture by hand, mixture by mixing machine, or transportation of premixed materials and the distribution with shovel, rake, hoe, or pail, of all kinds of concrete foundations necessary for mosaic and terrazzo work; the dumping of mixed materials that form base or top surface of terrazzo into prepared installation site, using wheelbarrow; the measuring of designated amounts of ingredients for terrazzo or grout, using graduated containers and scale, following standard formulas and specifications, and the loading of portable mixer using proper means of transport; the mixture of materials according to experience and requests from Terrazzo Worker;

C. The spreading of marble chips or other material over fresh terrazzo surface and the pressing of the material into terrazzo by use of a roller; the application of grout finishes to surfaces of installed terrazzo; the spreading of grout across terrazzo to finish surface imperfections, using trowel; the installation of grinding stones in power grinders, using hand tools; the fine grinding and polishing of the surface of terrazzo, when grout has set, using power grinders; the application of curing agent to installed terrazzo to promote even curing,

using brush or sprayer; the cutting of grooves in terrazzo stairs, using power grinder, and the filling of grooves with nonskid material;

D. The modification of mixing, grouting, grinding, and cleaning position and the securing of moisture membrane and wire mesh prior to pouring base materials for terrazzo installation;

E. The washing of the surface of polished terrazzo, using cleaner and water, and the application of sealer, according to manufacturer specifications, using brush; the cleaning of the installation site, and storage areas, tools, machines, and equipment; the removal of Terrazzo Worker materials and related debris from immediate work area; and

F. The provision of assistance to Terrazzo Worker with the following tasks: grinding surfaces of cured terrazzo; using power grinders;

AUTHORITY: section 290.240.2., RSMo [2000] 2016. Original rule filed Sept. 15, 1992, effective May 6, 1993. For intervening history, please consult the Code of State Regulations. Amended: Filed June 19, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Division of Labor Standards, Attn: Matt Cowell, Director, PO Box 449, Jefferson City, MO 65102-0449. To be considered, comments must be received within thirty (30) days after publication of this notice in the Missouri Register. No public hearing is scheduled.

Title 8—DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS Division 30—Division of Labor Standards Chapter 4—Minimum Wage and Overtime Rules

PROPOSED AMENDMENT

8 CSR 30-4.010 Applicability and Definitions. The division proposes to amend section (2).

PURPOSE: This amendment serves to reduce unnecessary restrictive language.

(2) As used in 8 CSR 30-4.010–8 CSR 30-4.060, unless the context clearly indicates otherwise, the following terms *[shall]* mean:

AUTHORITY: sections 290.512, 290.515, 290.517, and 290.523, RSMo [Supp. 2008] 2016. Original rule filed July 22, 1992, effective Feb. 26, 1993. Amended: Filed Oct. 8, 2003, effective April 30, 2004. Rescinded and readopted: Filed Aug. 15, 2008, effective March 30, 2009. Amended: Filed June 19, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Division of Labor Standards, Attn: Matt Cowell, Director, PO Box

449, Jefferson City, MO 65102-0449. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

**Title 8—DEPARTMENT OF LABOR AND
INDUSTRIAL RELATIONS
Division 30—Division of Labor Standards
Chapter 4—Minimum Wage and Overtime Rules**

PROPOSED AMENDMENT

8 CSR 30-4.020 Minimum Wage Rates. The division proposes to amend section (4), delete section (1), and renumber the remaining sections.

PURPOSE: This amendment serves to eliminate outdated and redundant requirements. This amendment also renumbers the regulation in light of the amendments.

[(1) Tipped employees shall receive at least the applicable minimum wages as set forth in this rule, except that the employer may claim gratuities as a credit toward the payment of the required minimum wage. The maximum amount of gratuities that the employer can claim as a credit is fifty percent (50%) of the applicable minimum wage rate. In no event shall the amount of wages and gratuities equal less than the applicable minimum wage, with the difference between the gratuities and the minimum wage being paid by the employer.]

[(2)](1) Subject to the requirements of sections 290.500 to 290.530, RSMo, at least the minimum wage shall be paid for all hours worked, regardless of the frequency of payment and regardless of whether the wage is paid on an hourly, salaried, commissioned, or any other basis. If, in any workweek, the total wages earned by an employee is less than the applicable minimum wage rate for the total hours worked, the employer shall pay the difference between the total wages earned and the amount required to equal the minimum wage for the total hours worked in the workweek as required under the minimum wage law.

[(3)](2) The workweek is the seven (7)-day period that is the basis for determining an employee's hourly earnings. Once established, an employer shall not change or manipulate an employee's workweek to evade the requirements of the Missouri Minimum Wage Law.

[(4)](3) Hourly wages, tips, gratuities, and commissions *[shall be]* **are** counted in the workweek in which the hourly wage, tip, gratuity, or commission is earned to determine if an employee earned at least the minimum wage rate.

AUTHORITY: sections 290.512, 290.515, and 290.523, RSMo [Supp. 2008] 2016. Original rule filed July 22, 1992, effective Feb. 26, 1993. Amended: Filed Oct. 8, 2003, effective April 30, 2004. Rescinded and readopted: Filed Aug. 15, 2008, effective March 30, 2009. Amended: Filed June 19, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Division of Labor Standards, Attn: Matt Cowell, Director, PO Box

449, Jefferson City, MO 65102-0449. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

**Title 8—DEPARTMENT OF LABOR AND
INDUSTRIAL RELATIONS
Division 30—Division of Labor Standards
Chapter 4—Minimum Wage and Overtime Rules**

PROPOSED AMENDMENT

8 CSR 30-4.040 Subminimum Wage Rates for the Physically or Mentally Impaired. The division proposes to amend sections (3) and (4).

PURPOSE: This amendment serves to reduce unnecessary restrictive language as well as eliminating outdated and redundant requirements.

(3) Employees affected by a proposed subminimum wage *[shall]* **will** be given reasonable notice of the public hearing and *[shall]* **will** be given the opportunity to submit oral or prepared written testimony concerning, but not limited to, the following:

(4) Subminimum wage rates that are to be considered by the director *[shall]* **will** be duly approved by filing a Notice of Proposed Rulemaking and a subsequent Order of Rulemaking with the secretary of state as provided for state agencies under Chapter 536, RSMo.

AUTHORITY: sections 290.515 and 290.523, RSMo [Supp. 2008] 2016. Original rule filed July 22, 1992, effective Feb. 26, 1993. Amended: Filed Aug. 15, 2008, effective March 30, 2009. Amended: Filed June 19, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Division of Labor Standards, Attn: Matt Cowell, Director, PO Box 449, Jefferson City, MO 65102-0449. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

**Title 8—DEPARTMENT OF LABOR AND
INDUSTRIAL RELATIONS
Division 30—Division of Labor Standards
Chapter 4—Minimum Wage and Overtime Rules**

PROPOSED AMENDMENT

8 CSR 30-4.050 Valuation of Goods and Services. The division proposes to delete section (2) and renumber the remaining sections.

PURPOSE: This amendment serves to eliminate outdated and redundant requirements. This amendment also renumbers the regulation in light of the amendments.

[(2) The term fair market value as used in this rule means the price which the goods or services in question would bring when offered for sale by one willing but not obliged to sell

it, and when bought by one willing or desirous to purchase it but who is not compelled to do so. The fair market value of the goods and services which are accepted by the employee as wages shall be computed on a weekly basis. Once an accounting has been made of the fair market value of the goods and services accepted by the employee in each work-week, full settlement of the amount owed to the employee shall be made by the employer on each regular payday. The employer shall be required to pay only the difference between the fair market value of the goods and services accepted during the pay period, and the minimum wage otherwise required to be paid.]

[(3)](2) The following is an illustrative, but not exhaustive, listing of goods and services which are not considered to be for the private benefit of the employee and whose fair market value may not be deducted by the employer as a credit toward the payment of the minimum wage to the employee:

- (A) Tools;
- (B) Equipment;
- (C) Uniforms, including, but not limited to, garments such as suits, dresses, aprons, and all other garments whatsoever as worn by the employees as a condition of employment. This apparel of a similar design, color or material, or forming part of the decorative pattern of the establishment or distinguishing the employee as an employee of the concern is presumed to be worn as a condition of employment;
- (D) Laundry or cleaning of uniforms;
- (E) Maintenance of tools, equipment, or uniforms;
- (F) Breakage or loss of tools, equipment, or uniforms;
- (G) Any other item required by the employer to be worn or used by the employee as a condition of employment; and
- (H) Transportation furnished to the employee where that transportation is an incident of and necessary to the employment, such as travel costs of railroad maintenance-of-way workers.

[(4)](3) The following is an illustrative, but not exhaustive, listing of goods and services which are considered to be for the private benefit of the employee and whose fair market value may be deducted by the employer as a credit toward the payment of the minimum wage to the employee:

- (A) Meals;
- (B) Lodging;
- (C) Tuition furnished by a college to its student employees;
- (D) Merchandise furnished at company stores and commissaries;
- (E) Fuel (including coal, kerosene, firewood, and lumber slabs);
- (F) Electricity, water, and gas furnished for the noncommercial personal use of the employee; and
- (G) Transportation furnished to employees between their homes and work, where the transportation is not necessary to the employment.

AUTHORITY: sections 290.512, 290.515, and 290.517, RSMo [Supp. 1990] 2016. Original rule filed July 22, 1992, effective Feb. 26, 1993. Amended: Filed June 19, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Division of Labor Standards, Attn: Matt Cowell, Director, PO Box 449, Jefferson City, MO 65102-0449. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

Title 8—DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS

Division 30—Division of Labor Standards

Chapter 4—Minimum Wage and Overtime Rules

PROPOSED AMENDMENT

8 CSR 30-4.060 Administrative Complaints; Notices Issued by the Director. The division proposes to amend section (1); delete sections (2), (3), and (4); and renumber the remaining sections.

PURPOSE: *This amendment serves to reduce unnecessary restrictive language as well as eliminate outdated and redundant requirements. This amendment also renumbers the regulation in light of the amendments.*

(1) An individual who believes that he or she has not been paid the required minimum wage may file a complaint on a form prescribed by the department. The department will not accept anonymous or third-party complaints. A complaint form can be obtained by accessing the department's website at [www.dolir.mo.gov] **labor.mo.gov** or by contacting the Division of Labor Standards by phone at (573) 751-3403.

[(2)] The department shall have authority to investigate and ascertain the wages of persons employed in any occupation included within the meaning of sections 290.500 to 290.530, RSMo. Employees that are not covered and not required to be paid the minimum wage rate are listed in section 290.500(3), RSMo.

(3) A complainant shall provide and keep the department advised of the complainant's current mailing address and telephone number.

(4) An employer under investigation shall provide the department with a copy of the first page of its most recent income and sales tax returns to determine the applicability of the minimum wage law. The employer shall also keep the department advised of the employer's current mailing address and telephone number.]

[(5)](2) Upon completion of the department's investigation, the parties **[shall]** will be notified of the department's findings.

[(6)](3) Any employer wishing to establish a training rate for learners and apprentices as permitted by section 290.517, RSMo, shall provide a written request to the director stating the classification of workers it desires to be designated as learners or apprentices. Upon such notice and in the discretion of the director, a hearing will be held consistent with section 290.517, RSMo.

AUTHORITY: sections 290.517 and 290.523, RSMo [Supp. 2008] 2016. Original rule filed Aug. 15, 2008, effective March 30, 2009. Amended: Filed June 19, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Division of Labor Standards, Attn: Matt Cowell, Director, PO Box 449, Jefferson City, MO 65102-0449. To be considered, comments must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

**Title 8—DEPARTMENT OF LABOR AND
INDUSTRIAL RELATIONS
Division 30—Division of Labor Standards
Chapter 5—Prevailing Wage Arbitration**

PROPOSED AMENDMENT

8 CSR 30-5.010 Filing for Arbitration. The division proposes to amend sections (1) and (4).

PURPOSE: This amendment serves to reduce unnecessary restrictive language as well as eliminate outdated and redundant requirements.

(1) *[An employer shall have forty-five (45) days from the date of notice of penalty for violations of sections 290.210 to 290.340, RSMo, to dispute the notice of penalty. Upon receipt of the written notice of dispute from the employer, the department shall notify the employer of its right to arbitration.]* Within ten (10) days of an employer's notification of the right to arbitration, an employer that wishes to arbitrate the matter shall submit to the department a Request for Arbitration (Request) along with any filing fees required by the arbitration service provider. Request for Arbitration forms may be obtained by contacting the Division of Labor Standards. The date of submission of a Request is the date the Request is postmarked or the date the department receives the Request by facsimile. Within ten (10) days of the department's receipt of a request under this rule, the department *[shall]* **will** mail a copy of the Request along with the department's guidelines for arbitration to the American Association of Arbitration (AAA) or other arbitration service provider if the other arbitration service provider is mutually agreed to by the parties. Included in this information *[shall]* **will** be the department's criteria for arbitrators relating to residence and cost per hour.

(4) For any filing or notice deadlines associated with arbitration under this rule that fall on Saturday, Sunday, or a legal holiday, the filing or notice *[shall]* **will** be deemed timely if accomplished on the next day which is neither a Saturday, Sunday, nor a legal holiday.

AUTHORITY: section 290.240(2), RSMo [2000] 2016. Emergency rule filed July 19, 2007, effective Aug. 28, 2007, expired Feb. 28, 2008. Original rule filed July 19, 2007, effective Feb. 29, 2008. Amended: Filed June 19, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Division of Labor Standards, Attn: Matt Cowell, Director, PO Box 449, Jefferson City, MO 65102-0449. To be considered, comments must be received within thirty (30) days after publication of this notice in the Missouri Register. No public hearing is scheduled.

**Title 8—DEPARTMENT OF LABOR AND
INDUSTRIAL RELATIONS
Division 30—Division of Labor Standards
Chapter 5—Prevailing Wage Arbitration**

PROPOSED AMENDMENT

8 CSR 30-5.020 Hearing Procedures for Arbitration. The division proposes to amend sections (1), (3), and (5); delete sections (6), (7),

(8), and (11); and renumber the remaining sections.

PURPOSE: This amendment serves to reduce unnecessary restrictive language as well as eliminate outdated and redundant requirements. This amendment also rennumbers the regulation in light of the amendments.

(1) Date, Time, and Site for Arbitration Hearing. All arbitration hearings *[shall]* **will** be held in Jefferson City unless otherwise agreed to by the parties. The parties shall respond to requests for hearing dates from the arbitration service provider within ten (10) days of receipt. Upon the request of either party or the arbitration service provider, the arbitrator *[shall have]* **has** the authority to convene a scheduling conference call and/or issue a Notice of Hearing setting the date, time, and place for hearing.

(3) Postponement or Cancellation. The arbitrator, for good cause shown, may postpone or cancel the hearing upon the request of a party or upon his or her own initiative. The parties can also agree to a postponement or cancellation of a hearing. Any postponement or cancellation fees owed to the arbitration service provider and/or the arbitrator shall be paid by the party requesting a postponement or cancellation. If the parties agree to a postponement or cancellation of a hearing, the postponement or cancellation fee shall be divided evenly between the parties. In the event of a cancellation of the arbitration after the commencement of the arbitration hearing, all fees owed to the arbitrator for services rendered shall be paid by the party requesting the cancellation. If an employer resolves the matter after requesting arbitration, but prior to an arbitrator's award, such resolution *[shall]* **will** be considered a cancellation of the arbitration and the employer shall pay all fees owed to the arbitrator for services rendered.

(5) Commencement of Hearing. A hearing *[shall]* **will** be opened by the following actions:

(A) Administration of the oath to all parties by the arbitrator; and

(B) Recording of the date, time, and place of the hearing and the presence of the arbitrator, the parties, and counsel, if any.

[(6) Evidence.

(A) The parties may offer such evidence as is relevant and material to the dispute and shall produce such additional evidence as the arbitrator may deem necessary to reach an understanding and determination of the dispute. An arbitrator can subpoena any witnesses and any documents upon the request of any party. If a party, or any person or organization within the control of a party, fails to obey a subpoena of an arbitrator, the arbitrator shall treat the evidence requested but not produced as establishing an inference favorable to the position of the party who subpoenaed the item, subject to the opposing party's right to seek an order in Circuit Court quashing or limiting the scope of the subpoena. In the event a party fails to comply with a subpoena, the requesting party may seek to enforce the subpoena in Circuit Court. The arbitrator shall make all decisions regarding the relevance and materiality of the evidence offered and conformity to legal rules of any evidence shall not be necessary. All of the evidence shall be taken in the presence of the arbitrator and all the parties except where any of the parties is absent in default or has waived the right to be present.

(B) All documents that are not filed with the arbitrator before or at the hearing, but arranged at the hearing or subsequently by agreement of the parties to be submitted, shall be filed with the arbitration service provider for transmission to the arbitrator or transmitted to the arbitrator directly if the parties agree. All parties shall be able to inspect the documents and object to their relevance and materiality to the dispute prior to the arbitrator making a determination of their

relevance and materiality.

(7) *Exhibits.* The arbitrator may receive into evidence exhibits offered by the parties. The names and addresses of all witnesses and exhibits in order received shall be made part of the record. The arbitrator shall afford each party equal opportunity for the presentation of relevant proofs. Final determinations of relevance shall be made by the arbitrator.

(8) *Witnesses.* Each party shall provide to the opposing party and the arbitrator a list of witnesses that it intends to call to testify or provide written statements. Such list shall be provided to the opposing party and arbitrator at least two (2) business days prior to the hearing. At the discretion of the arbitrator, failure to do so may result in the party's forfeiture of its right to call the witness. If a party wants to add persons to its witness list within two (2) business days of the hearing or at the hearing, the arbitrator may permit the witness to testify if the arbitrator finds it to be in the interest of fairness and relevant.]

[[9]](6) *Recording and Transcripts.* All hearings shall be tape-recorded. The tape-recording shall be retained by the arbitrator for a period in concurrence with the statute of limitations for an employee to bring a private action for the recovery of wages. Either party may request a written transcript at any time within this period, and the requesting party will bear the cost of the transcript, unless otherwise agreed by the parties.

[[10]](7) *Communication with the Arbitrator.* There shall be no direct communication between the parties and the arbitrator on substantive matters relating to the case other than at oral hearings, unless the parties and the arbitrator agree otherwise. Any other oral or written communication from the parties to the arbitrator shall be directed to the arbitration service provider for transmittal to the arbitrator.

[[11]] *Closing the Hearing.* The arbitrator shall inquire of all parties whether they have any additional exhibits or witnesses to present. The arbitrator shall afford each party the opportunity to present an oral closing statement. Once both parties indicate that they have no more evidence to present or the arbitrator determines that all necessary relevant and non-duplicative evidence has been presented and the record is complete, the arbitrator shall declare the hearing to be closed. If briefs or other documents are to be filed, the hearing shall be declared closed as of the final date set by the arbitrator for filing with the arbitration service provider or directly with the arbitrator. The time limit within which the arbitrator is required to make an award shall begin to run, in the absence of another agreement by the parties, on the closing date of the hearing.]

AUTHORITY: section 290.240(2), RSMo [2000] 2016. Emergency rule filed July 19, 2007, effective Aug. 28, 2007, expired Feb. 28, 2008. Original rule filed July 19, 2007, effective Feb. 29, 2008. Amended: Filed June 19, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Division of Labor Standards, Attn: Matt Cowell, Director, PO Box 449, Jefferson City, MO 65102-0449. To be considered, comments

must be received within thirty (30) days after publication of this notice in the *Missouri Register*. No public hearing is scheduled.

Title 8—DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS Division 30—Division of Labor Standards Chapter 5—Prevailing Wage Arbitration

PROPOSED AMENDMENT

8 CSR 30-5.030 Awards by the Arbitrator. The division proposes to amend the purpose and sections (1), (2), (3), and (5).

PURPOSE: This amendment serves to reduce unnecessary restrictive language in the purpose of the rule, as well as the rule itself.

PURPOSE: This rule establishes guidelines as to when an arbitrator's award [must] **should** be rendered and the form in which it [must] **should** be rendered, the result of a resolution of the controversy prior to an arbitrator's award, the release of arbitration documents for judicial proceedings and a party's recourse for an arbitrator's failure to follow 8 CSR 30-5.010 through 8 CSR 30-5.030.

(1) Time of Determination.

(B) The determination [shall] **will** be deemed to be rendered on the date it is postmarked or otherwise transmitted to the parties by the arbitrator, whether by regular mail or electronically. Decisions cannot be rendered by telephone.

(2) Form of the Arbitration Award. The arbitration award shall be in writing and shall be signed by the arbitrator. A party shall advise the arbitrator in writing, by no later than the conclusion of the hearing, whenever it would like the arbitrator to accompany the arbitration award with an opinion explaining the reasoning for the award. All costs incurred as a result of the opinion shall be paid by the party who requested the opinion. If both parties request the opinion, all costs incurred as a result of the opinion [shall] **will** be divided evenly between the parties.

(3) Resolution Prior to Arbitrator's Award. If at any time prior to the arbitrator rendering an award in the matter the employer pays the back wages as determined by the department, the matter [shall] **will** be deemed resolved and the proceedings [shall] **will** conclude. All costs shall be paid in accordance with 8 CSR 30-5.020(3) and (4) and section (2) of this rule.

(5) Failure to Comply with Determination of Arbitrator. If the employer fails to pay all wages due as determined by the arbitrator within forty-five (45) days following the date the arbitrator's award is rendered, or if the employer fails to exercise the right to seek arbitration, the department may then pursue an enforcement action to enforce the monetary penalty provisions of 290.250.1, RSMo. If the court orders payment of the penalties as prescribed in 290.250.1, RSMo, the department [shall] **will** be entitled to recover its actual cost of enforcement from such penalty amount.

AUTHORITY: section 290.240(2), RSMo [2000] 2016. Emergency rule filed July 19, 2007, effective Aug. 28, 2007, expired Feb. 28, 2008. Original rule filed July 19, 2007, effective Feb. 29, 2008. Amended: Filed June 19, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Division of Labor Standards, Attn: Matt Cowell, Director, PO Box 449, Jefferson City, MO 65102-0449. To be considered, comments must be received within thirty (30) days after publication of this notice in the Missouri Register. No public hearing is scheduled.

**Title 8—DEPARTMENT OF LABOR AND
INDUSTRIAL RELATIONS
Division 30—Division of Labor Standards
Chapter 6—Authorized Minimum Wage Rate Reductions**

PROPOSED AMENDMENT

8 CSR 30-6.010 Reduction in Minimum Wage Based on Physical or Mental Disabilities. The division proposes to amend the original purpose statement of the rule.

PURPOSE: This amendment serves to reduce unnecessary restrictive language in the purpose section of this regulation.

PURPOSE: This rule authorizes a reduction in the hourly wage rate [that must be paid to] for persons employed in St. Louis County through the Summer Work Experience Program operated by Jobs, Employment, and Supported Services due to physical or mental disabilities that curtail their job opportunities.

AUTHORITY: section 290.515, RSMo [Supp. 2008] 2016. Emergency rule filed June 1, 2009, effective June 11, 2009, expired Dec. 7, 2009. Original rule filed June 1, 2009, effective Nov. 30, 2009. Amended: Filed June 19, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Division of Labor Standards, Attn: Matt Cowell, Director, PO Box 449, Jefferson City, MO 65102-0449. To be considered, comments must be received within thirty (30) days after publication of this notice in the Missouri Register. No public hearing is scheduled.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 1—Director's Office
Chapter 3—Consolidation of Permit Processing**

PROPOSED AMENDMENT

10 CSR 1-3.010 Consolidation of Permit Processing. The department is amending section (1), to delete the last sentence of the rule.

PURPOSE: This amendment removes unnecessary requirements specifying how the department and a permittee will comply with section 640.017, RSMo, and provides flexibility when the consolidated permitting process is used.

(1) Whenever a facility or activity requires more than one (1) environmental permit administered by the department, an applicant may request, or the department may offer, a unified permitting schedule that covers the timing and order to obtain such permits, as provided in section 640.017, RSMo. Upon agreement between the applicant and the department, the processing of permit applications would then

be administered pursuant to that section. [When multiple permits are placed on public notice, the public comment period for such permits shall not be shorter than the longest individual comment period required for any of the permits involved or half of the total sum of days required by the individual comment periods for the permits involved, whichever is greater, and the comment period may be extended upon request.]

AUTHORITY: section 640.017, RSMo [Supp. 2009] 2016. Original rule filed Sept. 24, 2009, effective May 30, 2010. Amended: Filed June 26, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Missouri Department of Natural Resources, attention to Stuart Baker at PO Box 176, Jefferson City, MO 65102-0176 or via email to Stuart.Baker@dnr.mo.gov. A public hearing will be held on September 18, 2018, at 1:00 PM at the Department of Natural Resources, 1101 Riverside Drive, Jefferson City, MO. To be considered, comments must be received by the end of the public comment period on August 31, 2018.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 2—Air Quality Standards and Air Pollution
Control Rules Specific to the Kansas City Metropolitan
Area**

PROPOSED AMENDMENT

10 CSR 10-2.205 Control of Emissions From Aerospace Manufacture and Rework Facilities. The commission proposes to amend the rule purpose; sections (1) and (5); and subsections (2)(A), (2)(C), (2)(E)–(2)(H), (2)(K), (2)(M), (2)(N), (2)(R), (3)(E)–(3)(H), and (3)(L); renumber (4)(B)2.D.; and add new subsection (2)(U). If the commission adopts this rule action, the department intends to submit this rule amendment to the U.S. Environmental Protection Agency to replace the current rule that is in the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Proposed Rules website www.dnr.mo.gov/proposed-rules.

PURPOSE: The purpose of this amendment is to eliminate redundant requirements by exempting source operations regulated under the state's hazardous waste rules from certain solvent handling provisions of this rule. At the same time, this amendment will remove unnecessary use of restrictive words, update definitions specific to this rule, update/add incorporations by reference as applicable, make minor numbering corrections, and make other minor changes. The evidence supporting the need for this proposed rulemaking, per 536.016, RSMo, is a comment dated October 8, 2013 from an industry representative in the Air Program Advisory Forum's Rule Review Workgroup and Executive Order 17-03 Red Tape Reduction Review and related comments.

PURPOSE: This rule[making] will reduce volatile organic compound

emissions from aerospace manufacture and/or rework facilities located in the Kansas City ozone maintenance area. This rule[making] is required to comply with the Clean Air Act Amendments of 1990. [The RSMo 536.016 requirement for necessity evidence is the Kansas City Ozone Maintenance Plan adopted February 3, 1998, and Section 182 of the Clean Air Act.]

(1) Applicability.

(A) This rule[making shall apply] **applies** throughout Platte, Clay, and Jackson Counties.

(B) The requirements of this rule[making shall] apply to all aerospace manufacture and/or rework facilities with potential emissions of volatile organic compounds (VOC) exceeding twenty-five (25) tons per year.

(2) Definitions.

(A) [Definitions of individual specialty coatings specified in this rule are incorporated by reference from] **Specialty coating definitions in 40 CFR 63 Subpart GG, Appendix A, [with the following modifications:] promulgated as of July 1, 2018, with the exception of “mold release” and “caulking and smoothing compound,” apply and are hereby incorporated by reference in this rule, as published by the Office of Federal Register. Copies can be obtained from the U.S. Publishing Office Bookstore, 710 N. Capitol Street NW, Washington, DC 20401. This rule does not incorporate any subsequent amendments or additions. The following two (2) definitions, as defined below, shall be used for this rule:**

1. **Mold release**—A coating applied to a mold surface to prevent the mold piece from sticking to the mold as it is removed, or to an aerospace component for purposes of creating a form-in-place seal./.; and

2. **Caulking and smoothing compound**—A semi-solid material that is used to aerodynamically smooth exterior vehicle surfaces or fill cavities such as bolt hole accesses/. *A material shall not be classified as a caulking and smoothing compound if it, excluding materials that can be classified as a sealant.*

(C) **Aerospace vehicle or component**—Any fabricated part, processed part, assembly of parts, or completed unit, with the exception of electronic components, of any aircraft **including, but not limited to, airplanes, helicopters, missiles, rockets, and space vehicles.**

(E) **Aqueous [cleaning] solvent**—A cleaning solution in which water is the primary ingredient (greater than eighty percent (80%) by weight of cleaning solvent solution as applied must be water). Detergents, surfactants, and bioenzyme mixtures and nutrients may be combined with the water along with a variety of additives such as organic solvents (e.g. high boiling point alcohols), builders, saponifiers, inhibitors, emulsifiers, pH buffers, and antifoaming agents. Aqueous solutions must have a flash point greater than ninety-three degrees Celsius (93 °C) (two hundred degrees Fahrenheit (200 °F)) (as reported by the manufacturer) and the solution must be miscible with water.

(F) **Chemical milling maskants**—A coating that is applied directly to aluminum components to protect surface areas when chemical milling the component with a Type I or Type II etchant. Type I chemical milling maskants are used with a Type I etchant and Type II chemical milling maskants are used with a Type II etchant. This definition does not include bonding maskants, critical use and line sealer maskants, and seal coat maskants. Maskants that must be used with a combination of Type I or Type II etchants and any of the above types of maskants (i.e., **bonding, critical use and line sealer, and seal coat**) are also not included in this definition.

(G) **Energized electrical systems**—Any **alternating current (AC)** or **direct current (DC)** electrical circuit on an assembled aircraft once electrical power is connected, including interior passenger and cargo areas, wheel wells, and tail sections.

(H) **Flush cleaning**—The removal of contaminants such as dirt, grease, and coatings from an aerospace vehicle or component or

coating equipment by passing solvent over, into, or through the item being cleaned. The solvent may simply be poured into the item cleaned and then drained, or be assisted by air *[or]*, **compressed gas**, hydraulic pressure, or by pumping. **Spray gun cleaning** or *[H]*hand-wipe cleaning operations where wiping, scrubbing, mopping, or other hand actions are used are not included in this definition.

(K) **High volume low pressure (HVLP) spray equipment**—Spray equipment *[that is]* used to apply coating by means of spray gun that operates at ten pounds per square inch gauge (10 psig) of atomizing air pressure or less at the air cap.

(M) **Primer**—The first layer and any subsequent layers of identically formulated coating applied to the *[surface of an aerospace vehicle or component. Primers are typically used for corrosion prevention, protection from the environment, functional fluid resistance, and adhesion of subsequent coatings]* **article to provide corrosion resistance, surface etching, surface leveling, adhesion promotion, or other property depending on the end use or exposure of the final product.** Primers that are defined as specialty coatings are not included under this definition.

(N) **Self-priming topcoat**—A topcoat that is applied directly to *[an uncoated aerospace]* a vehicle or component for purposes of corrosion prevention, environmental protection, and function fluid resistance. More than one (1) layer of identical coating formulation may be applied to the vehicle or component.

(R) **Touch-up and repair operation**—That portion of the coating operation that is the incidental application of *[coating]* **finishing materials** used to cover minor imperfections in the coating finish or to achieve complete coverage. This definition includes out-of-sequence or out-of-cycle coating.

(U) **Waterborne (water-reducible) coating**—Any coating that contains more than five percent (5%) water by weight as applied in its volatile fraction.

[(U)](V) Definitions of certain terms specified in this rule, other than those specified in this rule section, may be found in 10 CSR 10-6.020.

(3) General Provisions.

(E) Each owner or operator of an aerospace manufacturing and/or rework operation shall comply with the following housekeeping requirements for any affected cleaning operation, unless the cleaning solvent used is an aqueous *[cleaning]* solvent, low vapor pressure hydrocarbon-based cleaning solvent, or contains less than one percent (1%) VOC by weight/./ **Hazardous waste under regulation 10 CSR 25-4.261 that is subject to the hazardous waste generators standards of 10 CSR 25-5.262 or the solvent wipe conditional exclusion requirements of 40 CFR 261.4(a)(26) or (b)(18), as incorporated in 10 CSR 25-4.261, is exempt from the requirements of paragraphs (3)(E)1. through (3)(E)3. below:**

1. Solvent-laden cloth, paper, or any other absorbent applicators used for cleaning shall be placed in bags or other closed containers upon completing their use. These bags and containers must be kept closed at all times except when depositing or removing these materials from the container. The bags and containers used must be of such a design so as to contain the vapors of the cleaning solvent. Cotton-tipped swabs used for very small cleaning operations are exempt from this requirement;

2. All fresh and spent cleaning solvents, except semi-aqueous solvent cleaners, used in aerospace cleaning operations shall be stored in closed containers; and

3. The handling and transfer of cleaning solvent to or from enclosed systems, vats, waste containers, and other cleaning operation equipment that hold or store fresh or spent cleaning solvents shall be conducted in such a manner that spills are minimized.

(F) Each owner or operator of an aerospace manufacturing and/or rework operation utilizing hand-wipe cleaning operations excluding the cleaning of spray gun equipment performed in accordance with subsection (3)(G) shall comply with one (1) of the following:

1. Utilize cleaning solvent solutions that are classified as an aqueous *[cleaning]* solvent and/or a low vapor pressure hydrocarbon-based

cleaning solvent; or

2. Utilize cleaning solvent solutions that have a composite vapor pressure of forty-five (45) mmHg or less at twenty degrees Celsius (20 °C).

(G) Each owner or operator of an aerospace manufacturing and/or rework operation shall clean all spray guns used in the application of primers, topcoats (including self-priming topcoats), and specialty coatings utilizing one (1) or more of the following techniques:

1. Enclosed system. **Clean** /S/spray guns *[shall be cleaned in]* within an enclosed system that is closed at all times except when inserting or removing the spray gun. *[Cleaning shall consist of forcing cleaning solvent through the gun.]* If leaks in the system are found, repairs shall be made as soon as practicable, but no later than fifteen (15) days after the leak was found. If the leak is not repaired by the fifteenth day after detection, the cleaning solvent shall be removed and the enclosed cleaner shall be shut down until the leak is repaired or its use is permanently discontinued;

2. Nonatomized cleaning. **Clean** /S/spray guns *[shall be cleaned]* by placing cleaning solvent in the pressure pot and forcing it through the gun with the atomizing cap in place. No atomizing air is to be used. The cleaning solvent from the spray gun shall be directed into a vat, drum, or other waste container that is closed when not in use;

3. Disassembled spray gun cleaning. **Clean** /S/spray guns *[shall be cleaned]* by disassembling and cleaning the components by hand in a vat, which shall remain closed at all times except when in use. Alternatively, the components *[shall]* may be soaked in a vat, which shall remain closed during the soaking period and when not inserting or removing components; and

4. Atomizing cleaning. **Clean** /S/spray guns *[shall be cleaned]* by forcing the cleaning solvent through the gun and directing the resulting atomized spray into a waste container that is fitted with a device designed to capture the atomized cleaning solvent emissions.

(H) Each owner or operator of an aerospace manufacturing and/or rework operation that includes a flush cleaning operation shall empty the used cleaning solvents each time aerospace parts or assemblies, or components of a coating unit with the exception of spray guns are flush-cleaned into an enclosed container or collection system that is kept closed when not in use or into a system with equivalent emission control approved by the director. Aqueous, semi-aqueous, *[and]* low vapor pressure hydrocarbon-based solvent materials, **and all wastes that are determined to be hazardous waste under regulation 10 CSR 25-4.261 and that are subject to the hazardous waste generators standards of 10 CSR 25-5.262** are exempt from the requirements of this subsection.

(L) The following cleaning operations are exempt from the requirements of subsection (3)(F) of this rule:

1. Cleaning during the manufacture, assembly, installation, maintenance, or testing of components of breathing oxygen systems that are exposed to the breathing oxygen;

2. Cleaning during the manufacture, assembly, installation, maintenance, or testing of parts, subassemblies, or assemblies that are exposed to strong oxidizers or reducers (e.g., nitrogen tetroxide, liquid oxygen, or hydrazine);

3. Cleaning and surface activation prior to adhesive bonding;

4. Cleaning of electronic parts and assemblies containing electronic parts;

5. Cleaning of aircraft and ground support equipment fluid systems that are exposed to the fluid including air-to-air heat exchangers and hydraulic fluid systems;

6. Cleaning of fuel cells, fuel tanks, and confined spaces;

7. Surface cleaning of solar cells, coating optics, and thermal control surfaces;

8. Cleaning during fabrication, assembly, installation, and maintenance of upholstery, curtains, carpet, and other textile materials used in the interior of the aircraft;

9. Cleaning of metallic and non-metallic materials used in hon-

eycomb cores during the manufacture or maintenance of these cores, and cleaning of the completed cores used in the manufacture or maintenance of aerospace vehicles or components;

10. Cleaning of aircraft transparencies, polycarbonate, or glass substrates;

11. Cleaning and solvent usage associated with research and development, quality control, and laboratory testing;

12. Cleaning operations, using nonflammable liquids, conducted within five feet (5') of energized electrical systems; and

13. Cleaning operations identified as essential uses *[under the Montreal Protocol]* in **40 CFR 82.4** for which the U.S. Environmental Protection Agency has allocated essential use allowances or exemptions.

(4) Reporting and Record Keeping.

(B) Record Keeping Requirements.

1. Each owner or operator of an aerospace manufacture and/or rework operation that applies coatings listed in subsection (3)(A) of this rule shall—

A. Maintain a current list of coatings in use with category and VOC content as applied;

B. Record each coating volume usage on a monthly basis; and

C. Maintain records of monthly volume-weighted average VOC content for each coating type included in averaging for coating operations that achieve compliance through coating averaging under paragraph (3)(B)2. of this rule.

2. Each owner or operator of an aerospace manufacture and/or rework operation that uses cleaning solvents subject to this rule shall—

A. Maintain a list of materials with corresponding water contents for aqueous and semi-aqueous hand-wipe cleaning solvents;

B. Maintain a current list of cleaning solvents in use with their respective vapor pressure or, for blended solvents, VOC composite vapor pressure for all vapor pressure compliant hand-wipe cleaning solvents. This list shall include the monthly amount of each applicable solvent used; and

C. Maintain a current list of exempt hand-wipe cleaning processes for all cleaning solvents with a vapor pressure greater than forty-five (45) mmHg used in exempt hand-wipe cleaning operations. This list shall include the monthly amount of each applicable solvent used.

[D.3.] All records must be kept on-site for a period of five (5) years and made available to the department upon request.

(5) Test Methods.

(A) An owner or operator of an aerospace manufacture and/or rework operation shall determine compliance for coatings which are not waterborne (water-reducible)/, and determine the VOC content of each formulation less water and less exempt solvents as applied using manufacturer's supplied data or Method 24 of 40 CFR *[part]* 60, Appendix A, as specified in **10 CSR 10-6.030(22)**. If there is a discrepancy between the manufacturer's formulation data and the results of the Method 24 analysis, compliance *[shall be based on]* is determined by the results from the Method 24 analysis. For waterborne (water-reducible) coatings, manufacturer's supplied data alone can be used to determine the VOC content of each formulation.

(B) An owner or operator of an aerospace manufacture and/or rework operation shall determine compliance for cleaning solvents using the following:

1. For aqueous and semi-aqueous *[cleaning]* solvents manufacturers' supplied data shall be used to determine the water content; or

2. For hand-wipe cleaning solvents required in subsection (3)(F) of this rule, manufacturers' supplied data or standard engineering reference texts or other equivalent methods shall be used to determine the vapor pressure or VOC composite vapor pressure for blended cleaning solvents.

(C) An owner or operator of an aerospace manufacture and/or rework operation electing to demonstrate compliance with this rule

by use of control equipment meeting the requirements of paragraph (3)(B)3. of this rule, shall demonstrate the required capture efficiency in accordance with EPA methods 18, 25, and/or 25A in 40 CFR 60, Appendix A, as specified in 10 CSR 10-6.030(22).

AUTHORITY: section 643.050, RSMo [Supp. 1999] 2016. Original rule filed Aug. 4, 2000, effective March 30, 2001. Amended: Filed June 21, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed amendment will begin at 9:00 a.m., September 27, 2018. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded to any interested person. Interested persons, whether or not heard, may submit a statement of their views until 5:00 p.m., October 4, 2018. Send online comments via the proposed rules web page www.dnr.mo.gov/proposed-rules, email comments to apcprulespn@dnr.mo.gov, or written comments to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 2—Air Quality Standards and Air Pollution
Control Rules Specific to the Kansas City Metropolitan
Area

PROPOSED AMENDMENT

10 CSR 10-2.230 Control of Emissions From Industrial Surface Coating Operations. The commission proposes to amend existing sections (1)–(6) into new sections (1)–(5). If the commission adopts this rule action, the department intends to submit this rule amendment to the U.S. Environmental Protection Agency to replace the current rule that is in the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Proposed Rules website www.dnr.mo.gov/proposed-rules.

PURPOSE: This regulation restricts volatile organic compound emissions from industrial surface coating operations. The purpose of this amendment is to remove unnecessary restrictive words, add exemptions, add definitions, correct test method references, remove obsolete requirements specific to sources that have closed, change sections to the standard rule format, and make minor clarifications and grammatical changes. The evidence supporting the need for this proposed rulemaking, per 536.016, RSMo, is Executive Order 17-03 Red Tape Reduction review and 536.175, RSMo, and related comments.

(1) [Application] Applicability.

(A) This regulation [shall apply] applies only in Clay, Jackson, and Platte Counties.

(B) This regulation [shall apply] applies to any installation with an uncontrolled potential to emit greater than 6.8 kilograms per day

(kg/day) or 2.7 tons per year of volatile organic compounds (VOC) from industrial surface coating operations covered under this rule. [This includes any installation which does not have an allowable VOC emission limit established under 10 CSR 10-6.060 or legally enforceable state implementation plan revision and has uncontrolled potential emissions greater than or equal to 6.8 kg/day or 2.7 tons per year.] The uncontrolled potential emit is the potential emissions (as defined) plus the VOC removed by emission control devices.

(C) This regulation is not applicable to the [surface coating of the] following [metal parts and products]:

1. Exterior refinishing of airplanes;
2. Automobile refinishing;
3. Customizing top coating of automobiles and trucks, if production is less than thirty-five (35) vehicles per day; [and]
4. Exterior of marine vessels/./;
5. Surface coating that is part of janitorial, building, and installation maintenance operations;
6. Research and development, performance testing, and quality control of coatings and surface coated products;
7. Aerosol coating products subject to 40 CFR 59 subpart C or E;
8. Field application of architectural coatings to buildings, building components, and stationary structures;
9. Powder coatings;
10. Surface coating and cleaning of aerospace vehicles or components at an aerospace manufacture or rework facility that—

A. Is subject to the requirements and/or aerospace specific exemptions of 10 CSR 10-2.205; or

B. Is not subject to 10 CSR 10-2.205 because the installation's potential to emit VOCs from aerospace surface coating and cleaning is twenty-five (25) tons per year or less;

11. Application and storage of coatings subject to 49 CFR 59 subpart D;

12. Printing operations subject to the requirements of 10 CSR 10-2.290 or 10 CSR 10-2.340;

13. Surface coating and cleaning of articles used for internal company operations including, but not limited to, work stands; scaffolding; jigs; tooling; dollies; tow bars; aircraft ground support equipment; portable equipment used for maintenance, testing, fabrication, or repair; toolboxes; storage bins; shelving; and other manufacturing or warehouse support items;

14. Adhesives and sealants that contain less than 0.17 pounds of VOC per gallon of coating (less water and exempt compounds) as applied;

15. Cyanoacrylate adhesives;

16. Adhesives, sealants, adhesive primers, and sealant primers that are supplied by the manufacturer or supplier in containers with a net volume of sixteen (16) fluid ounces or less, or a net weight of one (1) pound or less, except plastic cement welding adhesives and contact adhesives;

17. Contact adhesives that are supplied by the manufacturer or supplier in containers with a net volume of one (1) gallon or less;

18. Adhesives, sealants, adhesive primers, sealant primers, surface preparation, and cleanup solvents used in the following operations:

A. Tire repair operations, provided the adhesive is labeled for tire repair only;

B. Assembly, repair, and manufacture of aerospace or undersea-based weapon systems components;

C. Plastic solvent welding operations used in the manufacture of medical devices or in the manufacture of medical equipment; and

D. Plaque laminating operations in which adhesives are used to bond clear, polyester acetate laminate to wood with lamination equipment installed prior to July 1, 1992; and

19. Military specification coatings that meet the following criteria:

A. The coating is applied only to military equipment used for national defense;

B. The coating performance is critical to the successful operation of the military equipment; and

C. The coating is mandated in a specification or contract and a substitution of coatings is not allowed.

(2) Definitions.

(A) Adhesive—Any chemical substance that is applied for the purpose of bonding two (2) surfaces together other than by mechanical means.

(B) Adhesive primer—A product intended by the manufacturer for application to a substrate, prior to the application of an adhesive, to provide a bonding surface.

(C) Air-dried coating—The coatings dried by the use of air or forced warm air at temperatures up to ninety degrees Celsius (90 °C) (one hundred ninety-four degrees Fahrenheit (194 °F)).

(D) Architectural coating—A coating recommended for field application to stationary structures and their appurtenances, to portable buildings, to pavements, or to curbs. This definition excludes adhesives and coatings recommended by the manufacturer or importer solely for shop applications or solely for application to nonstationary structures, such as airplanes, ships, boats, and railcars.

(E) Automobile—A four (4)-wheel passenger motor vehicle or derivative capable of seating no more than twelve (12) passengers.

(F) Clear coat—A coating which lacks color and opacity or is transparent and uses the undercoat as a reflectant base or undertone color. This term also includes corrosion preventative coatings used for the interior of drums or pails.

(G) Coating applicator—An apparatus used to apply a surface coating.

(H) Coating line—One (1) or more apparatus or operations which include a coating applicator, flash-off area, and oven where a surface coating is applied, dried, or cured, or a combination of these.

(I) Contact adhesive—A contact adhesive does not include rubber cements that are primarily intended for use on paper substrates. Contact adhesive also does not include vulcanizing fluids that are designed and labeled for tire repair only. A contact adhesive is an adhesive that—

1. Is designed for application to both surfaces to be bonded together;

2. Is allowed to dry before the two (2) surfaces are placed in contact with each other;

3. Forms an immediate bond that is impossible, or difficult, to reposition after both adhesive-coated surfaces are placed in contact with each other; and

4. Does not need sustained pressure or clamping of surfaces after the adhesive-coated surfaces have been brought together using sufficient momentary pressure to establish full contact between both surfaces.

(J) Cyanoacrylate adhesive—An adhesive with a cyanoacrylate content of at least ninety-five percent (95%) by weight.

(K) Drum—Any cylindrical container of thirteen to one hundred ten (13–110)-gallon capacity.

(L) End seal compound—The gasket forming coating used to attach the end pieces of a can during manufacturing or after filling with contents.

(M) Extreme performance coating—A coating used on a metal or plastic surface where the coated surface is, in its intended use, subject to the following:

1. Chronic exposure to corrosive, caustic, or acidic agents, chemicals, chemical fumes, chemical mixtures, or solutions;

2. Repeated exposure to temperatures in excess of two hundred fifty degrees Fahrenheit (250 °F); or

3. Repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleansers, or scouring agents.

(N) Fabric coating—A coating applied to a textile substrate by dipping or by means of a knife or roll.

(O) Final repair—The final coatings applied to correct topcoat imperfections after the complete assembly of the automobile.

(P) Flash-off area—The space between the application area and the oven.

(Q) Industrial surface coating operation—The surface coating of manufactured items intended for distribution in commerce to persons other than the person or legal entity performing the surface coating.

(R) Interior body spray—The surface coating for the interior and ends of a two (2)-piece formed can or the surface coating of the side of the rectangular material to be used as the interior and ends of a three (3)-piece can.

(S) Light-duty truck—Any motor vehicle rated at eight thousand five hundred pounds (8,500 lbs.) gross vehicle weight or less or a derivation of this vehicle which is designed primarily for the purpose of transportation of property.

(T) Marine vessel—A craft capable of being used as a means of transportation on water, except amphibious vehicles.

(U) Pail—Any nominal cylindrical container of one to twelve (1–12)-gallon capacity.

(V) Primer—The first surface coating applied to the surface.

(W) Primer-surfacer—The surface coatings applied over the primer and beneath the topcoat.

(X) Sheet basecoat—The roll coated primary interior surface coating applied to surfaces for the basic protection of buffering filling material from the metal can surface.

(Y) Topcoat—The surface coating applied for the purpose of establishing the color of protective surface, or both, including ground coat and paint sealer materials, base coat, and clear coat.

(Z) Transfer Efficiency (TE)—Ratio of the amount of coating solids transferred onto a product to the total of coating solids used. In any surface coating operation, TE is the ratio of solids in a coating that adhere on a target surface to the total solids used in the process for coating the target surface.

(AA) Vinyl coating—The application of a decorative or protective topcoat, or printing or vinyl-coated fabric or vinyl sheet.

[(2)](BB) Definitions of certain general terms specified in this regulation may be found in 10 CSR 10-6.020.

(3) General Provisions. No person shall emit to the atmosphere any VOC from any industrial surface coating operation in excess of the amount allowed in [section (4)] subsections (3)(A) and (3)(B) of this rule. [This section will] The following emission limits and compliance dates apply [across] to all application areas, flash-off areas, and ovens used in an affected industrial surface coating operation.

[(4) Tables of Emission Limitations and Dates of Compliance.]

(A) Table A: VOC Emission Limits Based on Solids Applied.

Surface Coating Operations	Emission Limit # VOC/gal Solids Applied	Dates of Compliance (See Note 1)
Auto/light duty truck		
*Ford Motor Company		
Primer Surfacer	15.1	12/24/87
Topcoat (passenger)	15.1	12/31/88
Topcoat (truck)		
(See Note 2)	15.1	12/31/88
[General Motors Car		
Primer Surfacer	15.1	12/31/87
Topcoat	15.1	12/31/87]

(B) Table B: VOC Emission Limits Based on Weight of VOC per Gallon of Coating (minus water and non-VOC organic compounds).

Surface Coating Operation	Emission Limit # VOC/gal Coating (minus water) and non-VOC Organic Compounds	Dates of Compliance (See Note 1)
Large Appliance		
*Topcoat	2.8	12/31/81
Final Repair	6.5	12/31/81
Magnet wire	1.7	12/31/81
Metal furniture	3.0	12/31/81
Auto/light duty truck		
Ford Motor Company		
Electrocoat prime	1.2	12/31/82
Topcoat (truck)	3.6	12/31/85
Topcoat (passenger)	3.6	12/31/86
Final Repair	4.8	12/31/85
Miscellaneous		
Metal Parts—		
Extreme Performance Coating and		
Air-Dried Coatings	3.5	12/31/82
All Other Coatings	3.0	12/31/82
[General Motors Car		
Cathodic Electrocoat	1.2	12/31/82
Primer Surfacer	3.0	12/31/80
Topcoat	5.8	12/31/79
	5.0	12/31/81
Final Repair	6.5	7/01/79
	4.8	12/31/87
Plastic Fascia Topcoat	4.5	11/23/87
Miscellaneous		
Metal Parts—		
Extreme Performance and		
Air-Dried Coatings	3.5	12/31/82
All Other Coatings	3.0	12/31/82]
Paper	2.9	12/31/81
Vinyl Coating	3.8	12/31/81
Fabric Coating	2.9	12/31/81
Coil	2.6	12/31/81
Can		
2 piece exterior,	4.0	12/31/82
sheet basecoat	2.8	12/31/85
2 and 3 piece		
interior body spray	4.2	12/31/82
2 piece end exterior	4.2	12/31/82
3 piece side seam	5.5	12/31/82
End Seal Compound	4.2	12/31/82
	3.7	12/31/85
Railroad Cars, Farm		
Implements, Machinery		
and Heavy-Duty Trucks	3.5	12/31/82
Other Metal Parts		
Clear Coat	4.3	12/31/82
Extreme Performance		
Coat and Air-Dried		
Coating	3.5	12/31/82
Other Coatings	3.0	12/31/82

Note 1—The emission limit associated with the latest compliance date for each surface coating process supersedes interim emission limits associated with earlier compliance dates.

Note 2—A formal commitment submitted to and received by the director prior to 12/31/88 to construct or modify the truck topcoat surface coating operation no later than 12/31/90 to meet the provisions of 10 CSR 10-6.070 or 40 CFR 60 Subpart MM, whichever is more stringent, may be substituted for this emission limitation. The emission limit specified by the rules referenced in this note is 12.3

lbs. VOC per gallon of solids applied.

[(5) Determination of Compliance. Compliance with section (4) of this regulation shall be determined by the methods in subsections (5)(A)–(C) as applicable and appropriate.

(A) For subsection (4)(A), the calculation of daily volume-weighted emission performance for automobile and light-duty truck primer-surfacer and topcoat operations, shall be made according to procedures detailed in the Environmental Protection Agency (EPA) document entitled Protocol for Determining the Daily Volatile Organic Compound Emission Rate for Automobile and Light-Duty Truck Topcoat Operations dated June 10, 1988.

(B) For subsection (4)(B)—

1. Compliance with emission limits may be demonstrated using the method referenced in 10 CSR 10-6.030(14)(C) using the one (1)-hour bake. Emission performance shall be on the basis of a daily volume-weighted average of all coatings used in each surface coating operation as delivered to the coating applicator(s) on a coating line. The daily volume-weighted average ($DAVG_{vw}$) is calculated by the following formula:

$$DAVG_{vw} = \frac{\sum_{i=1}^n (A_i \times B_i)}{C}$$

Where: A = daily gal. each coating used (minus water and exempt solvents) in a surface coating operation.

B = lbs. VOC/gal coating (minus water and exempt solvents).

C = total daily gal. coating used (minus water and exempt solvents) in a surface coating operation.

n = number of all coating used in a surface coating operation;

or

2. Compliance with the emission limits in subsection (4)(B) may be demonstrated on pounds of VOC per gallon of coating solids basis. The demonstration is made by first converting the emission limit in subsection (4)(B) to pounds of VOC per gallon of coating solids as shown in the following three (3) steps:

$$\begin{aligned} & \frac{\text{lbs. VOC per gallon of coating minus water \& exempt solvents}}{1)} \times \frac{\text{(Emission Limit from (4)(B))}}{\text{(average density of solvents used to originally establish the emission limit)}} = \text{volume fraction of VOC} \\ & 2) \ 1 - \text{Volume fraction of VOC} = \text{Volume fraction of solids} \end{aligned}$$

$$\begin{aligned} & \frac{\text{lbs. VOC per gallon of coating minus water \& exempt solvents}}{3)} \times \frac{\text{(Emission Limit from (4)(B))}}{\text{volume fraction of solids}} = \text{lbs. VOC gallon of coating solids} \end{aligned}$$

This value is the new compliance figure. The VOC per gallon of coating solids for each coating used is then determined using the method referenced in 10 CSR 10-6.030(14)(C) using the one (1)-hour bake. The composite daily volume-weighted average of pounds of VOC per gallon of coating solids as tested for in the actual coatings used is compared to the new compliance figure. Source operations on a coating line using coatings with a composite actual daily volume-weighted average value less than or equal to the new compliance figure are in compliance with this regulation.

(C) As an alternative to the methods specified in subsections (5)(A) and (B), compliance with the emission limits specified in subsections (4)(A) and (B) may be demonstrated by the implementation of an emission reduction equivalency compliance plan which utilizes a daily weighted average of emissions from a single or combination of source operations provided that—

1. All source operations involved in the plan are subject to the emission limits of this regulation;

2. All source operations are part of the same installation;

3. The total actual VOC emissions for each twenty-four (24)-hour period do not exceed the sum of the allowable emissions determined from section (4) for each source operation for the same period;

4. Equivalent emission reductions are accomplished in the time intervals allowed in subsection (4)(B) as would be required for individual source operations;

5. After December 24, 1987, testing of raw materials, emissions, equipment, or a combination of these, must be performed prior to initiation of an alternate compliance plan to verify any equivalent emission reductions claimed. All test methods and procedures to be acceptable for use in the equivalency determination must receive prior review and must have been approved by the director. Failure to gain test method and procedure approval of the director will invalidate the equivalency claim; and

6. The overall plan is approved by the director.]

[(6)](4) Reporting and Record Keeping.

(A) The owner or operator of a coating line shall keep records detailing specific VOC sources, as necessary to determine compliance. These may include:

1. The type and the quantity of coatings used daily;
2. The coating manufacturer's formulation data for each coating on forms provided or approved by the director;
3. The type and quantity of solvents for coating, thinning, purging, and equipment cleaning used daily;
4. All test results to determine capture and control efficiencies, transfer efficiencies, and coating makeup;
5. The type and quantity of waste solvents reclaimed or discarded daily;
6. The quantity of pieces or materials coated daily; and
7. Any additional information pertinent to determine compliance.

(B) Records, such as daily production rates, may be substituted for actual daily coating use measurement provided the owner submits a demonstration approvable by the director that these records are adequate for the purposes of this regulation. This will apply for all surface coating industries until the U.S. Environmental Protection Agency (EPA) issues national daily emissions record keeping protocols for specific industrial classifications.

(C) [Records required under subsections (6)(A) and (B) shall be retained by the owner or operator for a minimum of two (2) years. These records shall be made available to the director upon request.] Owners or operators shall retain records for a minimum of two (2) years and make the records available to the director upon request.

(5) Test Methods. Use the methods in subsections (5)(A)–(C) as applicable and appropriate to determine compliance with section (3) requirements.

(A) To calculate the daily volume-weighted emission performance for automobile and light-duty truck primer-surfacer and topcoat operations for subsection (3)(A), use the procedures in the EPA document, *Protocol for Determining the Daily Volatile Organic Compound Emission Rate for Automobile and Light-Duty Truck Topcoat Operations* as incorporated by reference in 10 CSR 10-6.030(20).

(B) For subsection (3)(B)—

1. Compliance with emission limits may be demonstrated with EPA Method 24 as specified in 10 CSR 10-6.030(22) using the one (1)-hour bake. Emission performance is based on the daily volume-weighted average of all coatings used in each industrial surface coating operation as delivered to the coating applicator(s) on a coating line. The daily volume-weighted average (DAVG_{vw}) is calculated by the following formula:

$$DAVG_{vw} = \frac{\sum_{i=1}^n (A_i \times B_i)}{C}$$

Where: A = daily gal. each coating used (minus water and exempt solvents) in an industrial surface coating operation.

B = lbs. VOC/gal coating (minus water and exempt solvents).

C = total daily gal. coating used (minus water and exempt solvents) in an industrial surface coating operation.

n = number of all coating used in an industrial surface coating operation; or

2. Compliance with the emission limits in subsection (3)(B) may be demonstrated on pounds of VOC per gallon of coating solids basis. The demonstration is made by first converting the emission limit in subsection (3)(B) to pounds of VOC per gallon of coating solids as shown in the following three (3) steps:

lbs. VOC per gallon of coating minus water	(Emission Limit from (3)(B))	=	volume fraction of VOC
1) & exempt solvents			
7.36 lbs. per gallon	(average density of solvents used to originally establish the emission limit)		
2) 1 – Volume fraction of VOC	=	Volume fraction of solids	
lbs. VOC per gallon of coating minus water	(Emission Limit from (3)(B))	=	lbs. VOC gallon of coating solids
3) & exempt solvents	volume fraction of solids		

This value is the new compliance figure. The VOC per gallon of coating solids for each coating used is then determined with EPA Method 24 as specified in 10 CSR 10-6.030(22) using the one (1)-hour bake. The composite daily volume-weighted average of pounds of VOC per gallon of coating solids as tested for the actual

coatings used is compared to the new compliance figure. Source operations on a coating line using coatings with a composite actual daily volume-weighted average value less than or equal to the new compliance figure are in compliance with this regulation.

(C) As an alternative to the methods specified in subsections (5)(A) and (B), compliance with the emission limits specified in subsections (3)(A) and (B) may be demonstrated by the implementation of an emission reduction equivalency compliance plan, which utilizes a daily weighted average of emissions from a single or combination of source operations provided that—

1. All source operations involved in the plan are subject to the emission limits of this regulation;
2. All source operations are part of the same installation;
3. The total actual VOC emissions for each twenty-four (24)-hour period do not exceed the sum of the allowable emissions determined from section (3) for each source operation for the same period;
4. Equivalent emission reductions are accomplished in the time intervals allowed in subsection (5)(B);
5. After December 24, 1987, testing of raw materials, emissions, equipment, or a combination of these, shall be performed prior to initiation of an alternate compliance plan to verify any equivalent emission reductions claimed. Director approval prior to review is necessary for all test methods and procedures to be acceptable for use in the equivalency determination. Failure to gain test method and procedure approval of the director will invalidate the equivalency claim; and
6. The overall plan is approved by the director.

AUTHORITY: section 643.050, RSMo [1986] 2016. Original rule filed Dec. 15, 1978, effective July 12, 1979. For intervening history, please consult the *Code of State Regulations*. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed amendment will begin at 9:00 a.m., September 27, 2018. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded any interested person. Interested persons, whether or not heard, may submit a statement of their views until 5:00 p.m., October 4, 2018. Send online comments via the proposed rules web page www.dnr.mo.gov/proposed-rules, email comments to apcprulespn@dnr.mo.gov, or written comments to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 5—Air Quality Standards and Air Pollution
Control Rules Specific to the St. Louis Metropolitan
Area

PROPOSED AMENDMENT

10 CSR 10-5.220 Control of Emissions During Petroleum Liquid Storage, Loading, and Transfer. The commission proposes to amend the rule title, sections (1)–(3) and (5), and subsection (4)(B); amending and renumbering subsection (4)(D); and deleting subsection (4)(C). If the commission adopts this rule action, the department

intends to submit this rule amendment to the U.S. Environmental Protection Agency to replace the current rule that is in the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Proposed Rules website www.dnr.mo.gov/proposed-rules.

PURPOSE: This amendment removes obsolete provisions, reduces the regulatory burden on facilities, improves consistency with the Kansas City rule 10 CSR 10-2.260 that regulates the same types of facilities, eliminates the permitting requirement for Stage I vapor recovery systems, and clarifies rule language on testing, reporting, and other items. This amendment also complies with Executive Order 17-03 criteria and removes any unnecessary restrictive words, adds back definitions specific to the rule, and adds incorporations by reference as applicable. The evidence supporting the need for this proposed rulemaking, per 536.016, RSMo, is Executive Order 17-03 Red Tape Reduction Review and related comments.

PURPOSE: This rule restricts volatile organic compound emissions from the handling of petroleum liquids in five specific areas: petroleum storage tanks with a capacity greater than forty thousand gallons, the loading of gasoline into delivery vessels, the transfer of gasoline from delivery vessels into storage containers, gasoline delivery vessels and the fueling of motor vehicles from storage containers. This rule is [required] necessary to achieve the federally mandated reduction of hydrocarbon emissions in the St. Louis metropolitan area that contribute to the formation of ozone.

(1) Applicability.

(A) This rule [shall apply] applies throughout St. Louis City and Jefferson, St. Charles, Franklin and St. Louis Counties.

(C) Exemptions to This Rule and/or Specific Areas of This Rule.

1. Petroleum storage tanks. Subsection (3)(A) of this rule [shall] does not apply to petroleum storage tanks that—

A. Store processed and/or treated petroleum or condensate at a drilling and production installation prior to custody transfer;

B. Contain a petroleum liquid with a true vapor pressure less than 27.6 kilopascals (kPa) (4.0 psia) at ninety degrees Fahrenheit (90 °F);

C. Are welded construction, and equipped with a metallic-type shoe primary seal and have a shoe-mounted secondary seal or closure devices of demonstrated equivalence approved by the staff director; and

D. Store waxy, heavy pour crude oil.

2. Gasoline loading.

[A.] Subsection (3)(B) of this rule [shall] does not apply to a gasoline [loading installation] distribution facility whose average monthly throughput of gasoline is less than or equal to one hundred twenty thousand (120,000) gallons when averaged over the most recent calendar year, provided the gasoline [loading installation] distribution facility loads gasoline by submerged filling and—

[[I]]A. Upon request of the staff director, [O]owners or operators of gasoline [loading installation] distribution facilities submit a report to the staff director on a form supplied by the department stating the gasoline throughput for each month of the previous calendar year. The report shall be submitted no later than February 1 of each year;

[[II]]B. Delivery vessels purchased after December 31, 1995, are Stage I equipped;

[[III]]C. Owners or operators of a gasoline [loading installation] distribution facility maintain records of gasoline throughput and gasoline delivery; and

[[IV]]D. Delivery vessels operated by an exempt installation do not deliver to Stage I controlled tanks unless the delivery vessel is

equipped with and employs Stage I controls.

[B. A gasoline loading installation that fails to meet the requirements of the exemption in subparagraph (1)(C)2.A. of this rule for one (1) calendar year shall not qualify for the exemption again.]

3. This rule does not apply to stationary gasoline tanks with a capacity of less than or equal to five hundred (500) gallons.

4. Subsection (3)(E) of this rule does not apply to any gasoline dispensing facility (GDF) with one thousand (1,000) gallon or smaller tank(s) and monthly throughput of less than or equal to ten thousand (10,000) gallons of gasoline through the tanks.

5. Paragraph (3)(C)2. of this rule does not apply to gasoline transfers made to storage tanks equipped with floating roofs or their equivalent.

6. Subsection (3)(C) of this rule does not apply to any storage tank having a capacity less than or equal to two thousand (2,000) gallons used exclusively for the fueling of agricultural equipment.

7. Subsection (3)(E) of this rule does not apply to any stationary storage tank used primarily for the fueling of agricultural equipment.

8. Subsection (3)(F) does not apply to any gasoline storage tank having a capacity of less than or equal to one thousand (1,000 gallons).

(2) Definitions.

(B) Bulk plant—Any gasoline storage and distribution facility that receives gasoline by pipeline, ship or barge, or cargo tank and subsequently loads the gasoline into gasoline cargo tanks for transport to gasoline dispensing facilities, and has a gasoline throughput of less than twenty thousand (20,000) gallons per day. Gasoline throughput is the maximum calculated design throughput as may be limited by compliance with an enforceable condition under federal, state, or local law.

(C) Bulk terminal—Any gasoline storage and distribution facility that receives gasoline by pipeline, ship or barge, or delivery tank and has a gasoline throughput of twenty thousand (20,000) gallons per day or greater. Gasoline throughput is the maximum calculated design throughput as may be limited by compliance with an enforceable condition under federal, state, or local law.

(D) Cargo tank—A delivery tank truck or railcar which is loading gasoline or which has loaded gasoline on the immediately previous load.

(E) Condensate (hydrocarbons)—A hydrocarbon liquid separated from natural gas which condenses due to changes in the temperature or pressure, or both, and remains liquid at standard conditions.

(F) Crude oil—A naturally occurring mixture consisting of hydrocarbons and sulfur, nitrogen, or oxygen derivatives of hydrocarbons (or a combination of these derivatives), which is a liquid at standard conditions.

(G) Custody transfer—The transfer of produced crude oil or condensate, or both, after processing or treating, or both, in the producing operations, from storage tanks or automatic transfer facilities to pipelines or any other forms of transportation.

(H) Delivery vessel—A tank truck, trailer, or railroad tank car.

(I) External floating roof—A storage vessel cover in an open top tank consisting of a double deck or pontoon single deck which rests upon and is supported by petroleum liquid being contained and is equipped with a closure seal(s) to close the space between the roof edge and tank wall.

(J) Gasoline—A petroleum liquid having a Reid vapor pressure four pounds (4 lbs) per square inch or greater.

(K) Gasoline dispensing facility (GDF)—Any stationary facility which dispenses gasoline into the fuel tank of a motor vehicle and is not—

1. A gasoline distribution facility that transfers, loads, or unloads gasoline at bulk terminals, bulk plants, or pipeline facilities; or

2. A manufacturer of new motor vehicles performing initial

fueling operations dispensing gasoline into newly assembled motor vehicles equipped with onboard refueling vapor recovery (ORVR) at an automobile assembly plant while the vehicle is still being assembled on the assembly line.

(L) Lower explosive limit (LEL)—The lower limit of flammability of a gas or vapor at ordinary ambient temperatures expressed in percent of the gas or vapor in air by volume.

(M) Monthly throughput—The total volume of gasoline that is loaded into all gasoline storage tanks during a month, as calculated on a rolling thirty (30)-day average.

(N) Onboard refueling vapor recovery (ORVR)—A system on motor vehicles designed to recover hydrocarbon vapors that escape during refueling.

(O) Petroleum liquid—Petroleum, condensate, and any finished or intermediate products manufactured in a petroleum refinery with the exception of Numbers 2–6 fuel oils as specified in ASTM D 396-17a, as specified in 10 CSR 10-6.040(12), gas turbine fuel oils Number 2-GT-4-GT, as specified in ASTM D 2880-15, as specified in 10 CSR 10-6.040(20), and diesel fuel oils Number 2-D and 4-D, as specified in ASTM D 975-18, as specified in 10 CSR 10-6.040(14).

(P) Staff director—Director of the Air Pollution Control Program of the Department of Natural Resources, or a designated representative.

(Q) Stage I vapor recovery system—A system used to capture the gasoline vapors that would otherwise be emitted when gasoline is transferred from a loading installation to a delivery vessel or from a delivery vessel to a storage tank.

(R) Stage II vapor recovery system—A system used to capture the gasoline vapors that would otherwise be emitted when gasoline is dispensed from a storage tank to the fuel tank of a motor vehicle. Stage II vapor recovery includes both Stage I and Stage II Vapor Recovery equipment and requirements, unless otherwise stated.

(S) Submerged fill pipe—Any fill pipe the discharge opening of which is entirely submerged when the liquid level is six inches (6") above the bottom of the tank. When applied to a tank that is loaded from the side, any fill pipe, the discharge opening of which is entirely submerged when the liquid level is eighteen inches (18") or twice the diameter of the fill pipe, whichever is greater, above the bottom of the tank.

(T) Submerged filling—The filling of a gasoline storage tank through a submerged fill pipe with a discharge no more than six inches (6") (no more than twelve inches (12") for submerged fill pipes installed on or before November 9, 2006) from the bottom of the tank. Bottom filling of gasoline storage tanks is included in this definition.

(U) True vapor pressure—The equilibrium partial pressure exerted by a petroleum liquid as determined in American Petroleum Institute, Manual of Petroleum Measurement Standards, Chapter 19.2, Evaporative Loss From Floating-Roof Tanks, 2012, as published by the American Petroleum Institute and incorporated by reference in this rule. Copies can be obtained from API Publishing Services, 1220 L Street, NW, Washington, DC 20005. This rule does not incorporate any subsequent amendments or additions.

(V) Vapor recovery system—A vapor gathering system capable of collecting the hydrocarbon vapors and gases discharged and a vapor disposal system capable of processing the hydrocarbon vapors and gases so as to limit their emission to the atmosphere.

(W) Vapor recovery system modification—Any repair, replacement, alteration, or upgrading of Stage I or Stage II vapor recovery control equipment or gasoline dispensing equipment equipped with Stage II vapor recovery beyond normal maintenance of the system as permitted by the staff director.

(X) Vapor tight—When applied to a delivery vessel or vapor recovery system as one that sustains a pressure change of no more than seven hundred fifty (750) pascals (three inches (3") of water)

in five (5) minutes when pressurized to a gauge pressure of four thousand five hundred (4,500) pascals (eighteen inches (18") of water) or evacuated to a gauge pressure of one thousand five hundred (1,500) pascals (six inches (6") of water).

(Y) Waxy, heavy pour crude oil—A crude oil with a pour point of fifty degrees Fahrenheit (50 °F) or higher as determined by the ASTM D 97-17b, as specified in 10 CSR 10-6.040(10).

[(B)](Z) Definitions of certain terms specified in this rule, other than those defined in this rule section, may be found in 10 CSR 10-6.020.

(3) General Provisions.

(A) Petroleum Storage Tanks.

1. No owner or operator of petroleum storage tanks shall cause or permit the storage in any stationary storage tank of more than forty thousand (40,000) gallons capacity of any petroleum liquid having a true vapor pressure of one and five-tenths (1.5) pounds per square inch absolute (psia) or greater at ninety degrees Fahrenheit (90 °F), unless the storage tank is a pressure tank capable of maintaining working pressures sufficient at all times to prevent volatile organic compound (VOC) vapor or gas loss to the atmosphere or is equipped with one (1) of the following vapor loss control devices:

A. A floating roof, consisting of a pontoon type, double-deck type or internal floating cover or external floating cover, that rests on the surface of the liquid contents and is equipped with a closure seal(s) to close the space between the roof edge and tank wall. Storage tanks with external floating roofs shall meet the additional following requirements:

(I) The storage tank must be fitted with—

(a) A continuous secondary seal extending from the floating roof to the tank wall (rim-mounted secondary seal); or

(b) A closure or other device approved by the staff director that controls VOC emissions with an effectiveness equal to or greater than a seal required under subpart (3)(A)1.A.(I)(a) of this rule;

(II) All seal closure devices must meet the following requirements:

(a) There are no visible holes, tears, or other openings in the seal(s) or seal fabric;

(b) The seal(s) is intact and uniformly in place around the circumference of the floating roof between the floating roof and the tank wall; and

(c) For vapor-mounted primary seals, the accumulated area of gaps exceeding 0.32 centimeters, one-eighth inch (1/8") width, between the secondary seal and the tank wall shall not exceed 21.2 cm² per meter of tank diameter (1.0 in² per foot of tank diameter);

(III) All openings in the external floating roof, except for automatic bleeder vents, rim space vents and leg sleeves, must be equipped with—

(a) Covers, seals or lids in the closed position except when the openings are in actual use; and

(b) Projections into the tank which remain below the liquid surface at all times;

(IV) Automatic bleeder vents must be closed at all times except when the roof is floated off or landed on the roof leg supports;

(V) Rim vents must be set to open when the roof is being floated off the leg supports or at the manufacturer's recommended setting; and

(VI) Emergency roof drains must be provided with slotted membrane fabric covers or equivalent covers which cover at least ninety percent (90%) of the area of the opening;

B. A vapor recovery system with all storage tank gauging and sampling devices gas-tight, except when gauging or sampling is taking place. The vapor disposal portion of the vapor recovery system *[shall]* **has** to consist of an absorber system, condensation system, membrane system or equivalent vapor disposal system that processes the vapor and gases from the equipment being controlled; or

C. Other equipment or means of equal efficiency for purposes of air pollution control that may be approved by the staff director.

2. Control equipment described in subparagraph (3)(A)1.A. of this rule shall not be allowed if the petroleum liquid other than gasoline has a true vapor pressure of 11.1 psia or greater at ninety degrees Fahrenheit (90 °F). All storage tank gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.

3. Reporting and record keeping shall be per subsection (4)(A) of this rule.

(B) Gasoline Loading.

1. No owner or operator of a gasoline *[loading installation]* **distribution facility** or delivery vessel shall cause or permit the loading of gasoline into any delivery vessel from a gasoline *[loading installation]* **distribution facility** unless the gasoline *[loading installation]* **distribution facility** is equipped with a vapor recovery system or equivalent. *[This system or system equivalent shall be approved by the staff director and t]*The delivery vessel *[shall]* **must** be in compliance with subsection (3)(D) of this rule.

2. Gasoline loading shall be accomplished in a manner that the displaced vapors and air will be vented only to the vapor recovery system. Measures shall be taken to prevent liquid drainage from the loading device when it is not in use or to accomplish complete drainage before the loading device is disconnected. The vapor disposal portion of the vapor recovery system shall consist of one (1) of the following:

A. An absorber system, condensation system, membrane system, or equivalent vapor disposal system that processes the vapors and gases from the equipment being controlled and limits the discharge of VOC into the atmosphere to ten (10) milligrams of VOC vapor per liter of gasoline loaded;

B. A vapor handling system that directs the vapor to a fuel gas system; or

C. Other equipment of an efficiency equal to or greater than subparagraph (3)(B)2.A. or B. of this rule if approved by the staff director.

3. Reporting and record keeping shall be per subsection (4)(B) of this rule.

(C) Gasoline Transfer at GDFs.

1. No owner or operator of a gasoline storage tank or delivery vessel shall cause or permit the transfer of gasoline from a delivery vessel into a gasoline storage tank with a capacity greater than five hundred **fifty** *[(500)]* **(550)** gallons and less than or equal to one thousand (1,000) gallons unless—

A. The gasoline storage tank is equipped with a submerged fill pipe extending unrestricted to within six inches (6") of the bottom of the tank and not touching the bottom of the tank, or the storage tank is equipped with a system that allows a bottom fill condition;

B. All gasoline storage tank caps and fittings are vapor-tight when gasoline transfer is not taking place; and

C. Each gasoline storage tank is vented via a conduit that is—

(I) At least two inches (2") inside diameter; and

(II) At least twelve feet (12') in height above grade; and

(III) Equipped with a pressure/vacuum valve that is certified by the California Air Resources Board (CARB) *[at three inches water column pressure/eight inches water column vacuum (3"wc/8"wc)]* **except when the owner or operator provides documentation that the vapor recovery system is CARB certified for a different valve and will not function properly with a 3"wc/8"wc valve/ or equivalent as approved by the staff director. The pressure specifications for pressure/vacuum valves shall be a positive pressure setting of 2.5 to 6.0 inches of water and a negative pressure setting of 6.0 to 10.0 inches of water.**

2. No owner or operator of a gasoline storage tank or delivery vessel shall cause or permit the transfer of gasoline from a delivery vessel into a gasoline storage tank with a capacity greater than one thousand (1,000) and less than forty thousand (40,000) gallons

unless—

A. The gasoline storage tank is equipped with a Stage I vapor recovery system that is certified by a CARB Executive Order as having a collection efficiency of at least ninety-eight percent (98%);

B. The delivery vessel to these tanks is in compliance with subsection (3)(D) of this rule;

C. All vapor ports are popped fittings;

D. The delivery vessel is reloaded at installations complying with the provisions of subsection (3)(B) of this rule;

E. The vapor recovery system employs one (1) vapor line per product line during the transfer. The staff director may approve other delivery systems submitted to the department with test data demonstrating compliance with subparagraph (3)(C)2.A. of this rule;

F. All vapor hoses are at least three inches (3") inside diameter; *[and]*

G. All product hoses are less than or equal to four inches (4") inside diameter*[/i];*

H. Any component of the vapor recovery system that is not preventing vapor emissions as designed is repaired;

I. A department approved pressure decay test is completed and passed every three (3) years. The department must be notified at least seven (7) days prior to the test date to allow an observer the opportunity to be present. The test results shall be provided to the department within fourteen (14) days of the test event; and

J. A department approved pressure/vacuum valve test is completed and passed every three (3) years. The department must be notified at least seven (7) days prior to the test date to allow an observer the opportunity to be present. The test results shall be provided to the department within fourteen (14) days of the test event.

3. The staff director may approve a vapor recovery system or component that deviates from the requirements of subparagraph (3)(C)2.A. of this rule when provided documentation that—

A. The system or component has a collection efficiency of at least ninety-eight percent (98%); *[and]* or

B. Compliance with the requirements of subparagraph (3)(C)2.A. of this rule would lead to noncompliance with other state or federal regulations or to improper functioning of the gasoline storage tank system.

4. Aboveground gasoline storage tanks at GDFs shall not have a capacity greater than one thousand (1,000) gallons.

5. This subsection does not prohibit safety valves or other devices required by government regulations.

(D) Gasoline Delivery Vessels.

1. No owner or operator of a gasoline delivery vessel shall operate or use a gasoline delivery vessel which is loaded or unloaded at an installation subject to subsection (3)(B) or (3)(C) of this rule unless—

A. *[The delivery vessel is tested annually to demonstrate compliance with the test method specified in 40 CFR 63.425(e)]* Cargo tank tightness is conducted annually;

B. The owner or operator obtains the completed test results signed by a representative of the testing installation upon successful completion of the leak test*[/i];*

C. A copy of the vessel's current test results are kept with the delivery vessel at all times and made immediately available to the staff director upon request; and

D. The delivery vessel is repaired by the owner or operator and retested within fifteen (15) business days of testing if it does not meet the leak test criteria of subparagraph (3)(D)1.A. of this rule.

[2. An owner or operator of a gasoline delivery vessel who can demonstrate to the satisfaction of the staff director that the vessel has passed a current annual leak test in another state shall be deemed to have satisfied the requirements of subparagraph (3)(D)1.A. of this rule, if the other state's leak test program requires the same gauge pressure and test procedures as specified in subparagraph (3)(D)1.A.

of this rule.

3. *Reporting and record keeping shall be performed as specified in subsection (4)(C) of this rule.]*

[4.]2. This subsection does not prohibit safety valves or other devices required by government regulations.

(E) Fueling of Motor Vehicles at GDFs.

1. GDFs not equipped with a Stage II vapor recovery system. Owners or operators shall—

A. Employ vapor-tight tank gauging and sampling sites or ports, valves, breakaways, joints, and disconnects on the vapor recovery systems to prevent emissions of volatile organic compounds except during gauging or sampling; and

B. Ensure that motor vehicle refueling meets the requirements of 40 CFR 80.22(j) promulgated *[June 26, 1996]* as of **June 30, 2018**, and hereby incorporated by reference in this rule, as published by the Office of Federal Register, *U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, D.C. 20408*. Copies can be obtained from the *U.S. Publishing Office Bookstore, 710 N. Capitol Street NW, Washington, DC 20401*. This rule does not incorporate any subsequent amendments or additions.

[2. GDFs equipped with a Stage II vapor recovery system.

A. Owners or operators shall—

(I) Comply with the requirements of subparagraphs (3)(E)1.A.–B. of this rule.

(II) Maintain the Stage II vapor recovery system in good working order in accordance with the manufacturer's specifications and with no indication of visible liquid leaks. Vapor recovery system components may only be replaced with components that have equivalent performance;

(III) Post operation instructions conspicuously in the gasoline dispensing area for the vapor recovery system in use at each GDF. The instructions shall clearly describe how to fuel vehicles correctly with vapor recovery nozzles utilized at that GDF. The instructions shall also include a warning that repeated attempts to continue dispensing gasoline after the system has indicated that the vehicle fuel tank is full may result in spillage of gasoline;

(IV) Decommission the Stage II vapor recovery system no later than December 31, 2015. The decommissioning must be performed in accordance with the department's Stage II Decommissioning Checklist.

B. The staff director shall identify and list specific defects that substantially impair the effectiveness of components or systems used for the control of gasoline vapors resulting from motor vehicle fueling operations. This ongoing list shall be used by the staff director as a basis for marking the components or systems out-of-order and shall be made available to any GDF with a Stage II vapor recovery system in place.

C. Upon the staff director's identification of substantial defects in equipment or installation of a Stage II vapor recovery system, the system or components shall be marked "out-of-order" and no person shall use or permit the use of that system or component until those defects and all other defects have been repaired, replaced, or adjusted to establish compliance. The components or system may be released into operation when the staff director has reinspected the installation; found the system and components to be in good working order; and removed the "out-of-order" notice. The staff director shall reinspect the previously marked "out-of-order" system or component and other noted defects as expeditiously as possible after notification from the operator that the repairs have been completed. In no case shall the reinspection be more than four (4) business days from the operator's notification that the repairs have been completed. In those cases in which the reinspection cannot be scheduled within the

required time, the owner or operator may remove the "out-of-order" notice with permission of the staff director. If reinspection reveals that compliance has not been established, the system or components shall remain tagged "out-of-order." The staff director shall conduct a second reinspection within seven (7) business days from the operator's notification that repairs have been completed.

[3.]2. After [the effective date of this rule,] **December 31, 2015**, no owner or operator of a GDF may install [a new] or operate a Stage II vapor recovery system.

[(F) Permits Required.]

1. No owner or operator of a GDF subject to subsections (3)(C) or (3)(E) of this rule may construct or modify a Stage I or Stage II vapor recovery system without obtaining a construction permit according to subsection (3)(G) of this rule; and

2. No owner or operator of a GDF subject to subsections (3)(C) or (3)(E) of this rule shall operate without an operating permit obtained according to subsection (3)(H) of this rule.

(G) Construction Permits for Vapor Recovery Systems for New GDFs, Vapor Recovery System Modification for Existing GDFs, and Stage I experimental technology.

1. Construction of a new GDF that requires a Stage I vapor recovery system, decommission of an existing Stage II vapor recovery system, or major modification to an existing GDF. An owner or operator constructing a new GDF that requires a Stage I vapor recovery system, decommissioning an existing Stage II vapor recovery system, or modifying an existing vapor recovery system such that the fixed capital costs of the new components will exceed fifty percent (50%) of the fixed capital cost of a new gasoline dispensing system (including only those components directly related to gasoline dispensing and storage) shall—

A. Submit an application on a form supplied by the department for a permit to construct at least thirty (30) days prior to beginning construction. The application shall include:

(I) Complete diagrams and a thorough description of the planned installation;

(II) Plumbing diagrams including vent lines and material of all underground and aboveground plumbing;

(III) For gasoline storage tanks subject to paragraph (3)(C)2. of this rule, current CARB Executive Orders for the proposed Stage I vapor recovery system;

(IV) Detailed description of the storage tank(s); and

(V) Schedule of construction;

B. Obtain a construction permit prior to beginning construction;

C. Display the construction permit in a prominent location during construction;

D. Establish compliance with all rules and requirements of Division 10 of Title 10 of the Code of State Regulations;

E. Obtain staff director approval of final test methods and procedures that will be used to demonstrate compliance;

F. Meet the testing requirements in subparagraph (3)(H)1.B. of this rule; and

G. Obtain and maintain on-site, in a prominent location, the current operating permit from the director for the site and the specific vapor recovery system that was installed. The operating permit shall be maintained according to subsection (3)(H) of this rule.

2. Minor modification to existing GDF. An owner or operator of an existing GDF modifying an existing vapor recovery system such that the fixed capital costs of the new components will not exceed fifty percent (50%) of the fixed

capital cost of a new gasoline dispensing system (including only those components directly related to gasoline dispensing and storage) shall—

A. Submit a construction permit notification prior to construction for projects that include, but are not limited to, any modification that—

(I) Requires breaking concrete in an area within fifteen (15) feet of the vapor lines or vent lines;

(II) Modifies vapor lines or vent lines themselves;

(III) Affects the operation of the vapor recovery system; or

(IV) Could result in improper functioning of the vapor recovery system;

B. Supply any information requested by the staff director for the specific installation. Such information may include, but is not limited to, plumbing diagrams, including vapor or vent lines; material of all underground and aboveground plumbing; current CARB executive orders for the proposed vapor recovery system and equipment; and proof of compliance with all rules and requirements of Division 10 of Title 10 of the Code of State Regulations;

C. Modify the vapor recovery system in accordance with the rules and requirements of Division 10 of Title 10 of the Code of State Regulations. If, after review of the application, or inspection of the modification to the vapor recovery system, it is discovered that the modification is not in compliance with the rules and requirements of Division 10 of Title 10 of the Code of State Regulations, the owner or operator will be subject to enforcement action, and must bring the facility back into compliance with the rules and requirements of Division 10 of Title 10 of the Code of State Regulations;

D. Meet the testing requirements in paragraph (3)(H)1. of this rule; and

E. Upon completion of testing, obtain and display, in a prominent location, on-site the current operating permit from the director for the specific site and the specific vapor recovery system that was installed. The operating permit shall be maintained according to subsection (3)(H) of this rule.]

(F) Requirements for vapor recovery systems associated with new GDF installations, complete vapor recovery system replacements associated with existing GDFs, partial vapor recovery system modifications associated with existing GDFs, and installation of GDFs with Stage I experimental technology.

1. Any owner or operator subject to paragraph (3)(C)2. installing a new GDF or modifying an existing GDF that requires a complete replacement of the Stage I vapor recovery system of one (1) or more underground storage tank shall—

A. Notify the department using an approved form at least fourteen (14) days before installation. The notification shall include complete diagrams, a thorough description of the planned installation, a detailed description of the storage tank(s), plumbing diagrams including vent lines, and a schedule of construction. The notification shall also include a list of CARB approved ninety-eight percent (98%) efficient equipment and/or reference department approval for the proposed Stage I vapor recovery system. The notice is valid for one hundred eighty (180) days from receipt by the department; and

B. Conduct and pass a department approved pressure decay test and a department approved pressure/vacuum valve test within thirty (30) days of construction completion. The department must be notified at least seven (7) days prior to the test date to allow an observer the opportunity to be present. The test results have to be provided to the department within fourteen (14) days of the test event.

2. Any owner or operator of an existing GDF that requires a partial modification to a Stage I vapor recovery system subject

to paragraph (3)(C)2. shall notify the department using an approved form before installation. The notification has to include a description of the planned installation. The notification has to also include a list of CARB approved ninety-eight percent (98%) efficient equipment and/or reference department approval for the proposed Stage I vapor recovery system. The notice is valid for one hundred eighty (180) days from receipt by the department.

3. Experimental Stage I technology. The staff director may approve Stage I experimental technology for a specific GDF. Experimental technology may be approved for up to three (3) years for a limited number of GDFs under specific conditions determined by the staff director. GDFs applying for approval of experimental technology shall—

A. Submit an application for staff director approval at least ninety (90) days prior to beginning construction. The application shall include, but not be limited to:

(I) Complete diagrams and a thorough description of the planned installation;

(II) Plumbing diagrams including vent lines and material of all underground and aboveground plumbing; and

(III) Standards, test data, history, and related information for the proposed system;

B. Submit to the staff director a detailed plan for the construction and operation of the system. The plan shall include a description of the planned testing and record keeping for the GDF. The staff director may issue the construction permit when all conditions of the testing GDF are deemed satisfactory;

C. Display the construction permit in a prominent location during construction;

D. Install monitoring equipment to prove that the vapor recovery system is leaktight if requested by the staff director; and

E. Upon completion of testing, obtain and maintain on-site, in a prominent location, a current operating permit from the staff director for the specific innovative technology that is in operation. The permit shall specify the technology, the location, and the time period the technology will be tested.

4. Emergency Repairs.

A. Owners or operators of GDFs requiring emergency repair or replacement of Stage I vapor recovery system components subject to subsection (3)(C)2. may immediately begin corrective construction if the construction is in response to an accident or event that—

(I) Creates an abnormally high threat of fire;

(II) Poses an environmental hazard by allowing release of liquid product onto the ground or abnormal release of vapor into the air; and/or

(III) Threatens public safety; and

B. Owners or operators of GDFs electing to make emergency repair or replacement per subparagraph [(3)(G)4.A.] (3)(F)4.A. of this rule *[shall] have to* contact the department within forty-eight (48) hours of the commencement of the repair or replacement to determine what future action is required for compliance with this rule.

5. *[Owners or operators of GDFs making modifications to the Stage I vapor recovery system per paragraph (3)(F)2. of this rule may begin modification upon submittal of the construction permit notification.] Upon the department's discovery of an installation that is not in compliance with the requirements of subsection (3)(F) of this rule, the department's authorized representative may restrict the owner and operator from completing the vapor recovery system installation until the department approves the installation.*

[6. The director shall issue a construction permit or a permit rejection within thirty (30) days of receipt of all construction permit applications submitted per paragraph (3)(G)1. of this rule.

7. Owners or operators of GDFs shall pay the department a fee of one hundred dollars (\$100) for each construc-

tion permit application submitted in accordance with subsection (3)(G) of this rule.

(H) Operating Permits. All owners or operators of installations subject to subsection (3)(C) or (3)(E) of this rule shall apply to the director for an operating permit.

1. Completion of construction. To obtain an operating permit after the completion of construction, the owner or operator of a GDF shall—

A. Apply to the director for an operating permit within thirty (30) days of construction completion;

B. Conduct and pass a department approved pressure decay test, pressure/vacuum valve test, and, where a Stage II vapor recovery system is in place, a dynamic back pressure/liquid blockage test;

C. Schedule the test and notify the staff director at least seven (7) days prior to the test date. The staff director may observe the test, but it is not required that the staff director be present and observe the test;

D. Provide the test results to the staff director;

E. Demonstrate that the installation maintains a system of record keeping that meets the requirements of subsection (4)(D) of this rule; and

F. Establish compliance with all rules and requirements of Division 10 of Title 10 of the Code of State Regulations.

2. Renewal of operating permits. The operating permit is renewable on the date specified in the initial operating permit and for periods of three (3) years after the initial permit term expires. In order to renew the operating permit the owner or operator of a GDF shall—

A. Apply to the director for renewal of the operating permit and test within ninety (90) days prior to the renewal date;

B. Demonstrate that the GDF maintained all vapor recovery system components in good operating order during the preceding operating permit term including prompt efforts to establish compliance following "out-of-order" notices;

C. Conduct and pass a department approved pressure decay test, pressure/vacuum valve test, and, where a Stage II vapor recovery system is in place, a dynamic back pressure/liquid blockage test, prior to the expiration date of the permit;

D. Schedule the test and notify the staff director at least seven (7) days prior to the test date. The staff director may observe the test, but it is not required that the staff director be present and observe the test;

E. Provide the test results to the staff director; and

F. Maintain records according to subsection (4)(D) of this rule.

3. Owners or operators of an installation using a vapor recovery system that is decertified by CARB shall establish compliance with this rule within one (1) year or by the next renewal date of the operating permit whichever is longer. Failure to establish compliance will result in nonrenewal of the operating permit.

4. Owners or operators of GDFs shall pay the department a fee of one hundred dollars (\$100) for each operating permit.]

[(I)](G) Owner/Operator Compliance. The owner or operator of a vapor recovery system subject to this rule shall—

1. Operate the vapor recovery system and the gasoline loading equipment in a manner that prevents—

A. Gauge pressure from exceeding four thousand five hundred (4,500) pascals (eighteen inches (18") of $[H_2O]$ water) in the delivery vessel;

B. A reading equal to or greater than one hundred percent (100%) of the lower explosive limit (LEL), measured as propane at two point five (2.5) centimeters from all points on the perimeter of

a potential leak source when measured by *[the method referenced in] Method 21—Determination of Volatile Organic Compound Leaks as specified in 10 CSR 10-6.030((14)(E))((22))* during loading or transfer operations; and

C. Visible liquid leaks during loading or transfer operations; and

2. Repair and retest within fifteen (15) days, a vapor recovery system that exceeds the limits in paragraph *[(3)(I)1.] (3)(G)1.* of this rule; and].

[3. Reporting and record keeping shall be per subsection (4)(D) of this rule.]

(4) Reporting and Record Keeping.

(B) Owners or operators of gasoline *[loading installations] distribution facilities* subject to subsection (3)(B) of this rule shall keep complete records documenting the number of delivery vessels loaded and their owners. Records *[shall have to be kept for two (2) years and made available to the staff director within five (5) business days of a request.*

[(C) Owners or operators of gasoline delivery vessels subject to subsection (3)(D) of this rule shall keep records of all tests and maintenance performed on the vessels. Records shall be kept for two (2) years and made available to the staff director within five (5) business days of a request. Also a copy of the vessel's current Tank Truck Tightness Test results shall be kept with the delivery vessel at all times and made immediately available to the staff director upon request.]

[(D)](C) Owner/Operator Compliance. The owner or operator of a vapor recovery system subject to subsection (3)(C), (3)(E), or (3)(I)](G) of this rule shall maintain records of department permits, inspection reports, enforcement documents, *[training certifications,]* gasoline deliveries, routine and unscheduled maintenance, repairs, and all results of tests conducted. Unless otherwise specified in this rule, records shall be kept for two (2) years and made available to the staff director within five (5) business days of a request.

(5) Test Methods.

(A) Gasoline Loading. Gasoline loading testing procedures to determine compliance with subparagraph (3)(B)2.A. of this rule shall be according to **Method 25—Determination of Total Gaseous Nonmethane Organic Emissions as Carbon as specified in 10 CSR 10-6.030(22) [subsection (14)(A)]** or by any method determined by the staff director. The staff director, at any time, may monitor an installation subject to subsection (3)(B) of this rule to confirm compliance with this rule.

(B) *[Gasoline Delivery Vessels. Testing procedures for gasoline delivery vessels to determine compliance with subsection (3)(D) of this rule shall be according to 10 CSR 10-6.030 subsection (14)(B) or by any method determined by the staff director.]* Testing procedures to determine compliance with subparagraph (3)(D)1.A. shall be performed according to **40 CFR 63.425(e), Subpart R. 40 CFR 63 promulgated as of June 30, 2018 is hereby incorporated by reference in this rule, as published by the Office of the Federal Register. Copies can be obtained from the U.S. Publishing Office Bookstore, 710 N. Capitol Street NW, Washington DC 20401. This rule does not incorporate any subsequent amendments or additions.** The staff director, at any time, may monitor a gasoline delivery vessel subject to subsection (3)(D) of this rule to confirm compliance with this rule.

(C) Fueling of Motor Vehicles and Gasoline Transfer at GDFs. The staff director, at any time, may monitor a GDF subject to subsection (3)(C) or (3)(E) of this rule to confirm compliance with this rule. *[The staff director may require a leak test, a back pressure blockage test, a pressure/vacuum valve test, or may require any test or monitoring procedure in order to determine compliance with this rule.]*

(D) All emission controls that are approved by the staff director

will not be considered federally enforceable and will not shield a source from the obligation to comply with the underlying federal emission controls until submitted to EPA and approved by EPA in the state implementation plan.

AUTHORITY: section 643.050, RSMo [Supp. 2013] 2016. Original rule filed March 14, 1967, effective March 24, 1967. For intervening history, please consult the Code of State Regulations. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed amendment will begin at 9:00 a.m., September 27, 2018. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded any interested person. Interested persons, whether or not heard, may submit a statement of their views until 5:00 p.m., October 4, 2018. Send online comments via the proposed rules web page www.dnr.mo.gov/proposed-rules, email comments to apcprulespn@dnr.mo.gov, or written comments to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176.

Title 10—DEPARTMENT OF NATURAL RESOURCES

Division 10—Air Conservation Commission

Chapter 5—Air Quality Standards and Air Pollution Control Rules Specific to the St. Louis Metropolitan Area

PROPOSED AMENDMENT

10 CSR 10-5.295 Control of Emissions From Aerospace Manufacture and Rework Facilities. The commission proposes to amend the rule purpose; sections (1) and (5); and subsections (2)(A), (2)(C), (2)(E)–(2)(H), (2)(K), (2)(M), (2)(N), (2)(R), (3)(E)–(3)(H), and (3)(L); renumber (4)(C) to (4)(B)3.; and add new subsection (2)(U). If the commission adopts this rule action, the department intends to submit this rule amendment to the U.S. Environmental Protection Agency to replace the current rule that is in the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Proposed Rules website www.dnr.mo.gov/proposed-rules.

PURPOSE: The purpose of this amendment is to eliminate redundant requirements by exempting source operations regulated under the state's hazardous waste rules from certain solvent handling provisions of this rule. At the same time, this amendment will remove unnecessary use of restrictive words, update definitions specific to this rule, update/add incorporations by reference as applicable, make minor numbering corrections, and make other minor changes. The evidence supporting the need for this proposed rulemaking, per 536.016, RSMo, is a comment dated October 8, 2013 from an industry representative in the Air Program Advisory Forum's Rule Review Workgroup and Executive Order 17-03 Red Tape Reduction Review and related comments.

PURPOSE: *This rule[making] will reduce volatile organic compound emissions from aerospace manufacture and/or rework facilities located in the St. Louis nonattainment area. This rule[making] is required to comply with the Clean Air Act Amendments of 1990.*

(1) Applicability.

(A) This rule[making shall apply] applies throughout St. Louis City and Jefferson, St. Charles, Franklin, and St. Louis Counties.

(B) The requirements of this rule[making shall] apply to all aerospace manufacture and/or rework facilities with potential emissions of volatile organic compounds exceeding twenty-five (25) tons per year.

(2) Definitions.

(A) *[Definitions of individual specialty coatings specified in this rule are incorporated by reference from] Specialty coating definitions in 40 CFR 63 Subpart GG, Appendix A, [with the following modifications:] promulgated as of July 1, 2018, with the exception of “mold release” and “caulking and smoothing compound,” apply and are hereby incorporated by reference in this rule, as published by the Office of Federal Register. Copies can be obtained from the U.S. Publishing Office Bookstore, 710 N. Capitol Street NW, Washington, DC 20401. This rule does not incorporate any subsequent amendments or additions. The following two (2) definitions, as defined below, shall be used for this rule:*

1. Mold release—A coating applied to a mold surface to prevent the mold piece from sticking to the mold as it is removed, or to an aerospace component for purposes of creating a form-in-place seal./.; and

2. Caulking and smoothing compound—A semi-solid material that is used to aerodynamically smooth exterior vehicle surfaces or fill cavities such as bolt hole accesses/. *A material shall not be classified as a caulking and smoothing compound if it, excluding materials that can be classified as a sealant.*

(C) Aerospace vehicle or component—Any fabricated part, processed part, assembly of parts, or completed unit, with the exception of electronic components, of any aircraft **including, but not limited to, airplanes, helicopters, missiles, rockets, and space vehicles.**

(E) Aqueous *[cleaning]* solvent—A cleaning solution in which water is the primary ingredient (greater than eighty percent (80%) by weight of cleaning solvent solution as applied must be water). Detergents, surfactants, and bioenzyme mixtures and nutrients may be combined with the water along with a variety of additives such as organic solvents (e.g. high boiling point alcohols), builders, saponifiers, inhibitors, emulsifiers, pH buffers, and antifoaming agents. Aqueous solutions must have a flash point greater than ninety-three degrees Celsius (93 °C) (two hundred degrees Fahrenheit (200 °F)) (as reported by the manufacturer) and the solution must be miscible with water.

(F) Chemical milling maskants—A coating that is applied directly to aluminum components to protect surface areas when chemical milling the component with a Type I or Type II etchant. Type I chemical milling maskants are used with a Type I etchant and Type II chemical milling maskants are used with a Type II etchant. This definition does not include bonding maskants, critical use and line sealer maskants, and seal coat maskants. Maskants that must be used with a combination of Type I or Type II etchants and any of the above types of maskants (i.e., **bonding, critical use and line sealer, and seal coat**) are also not included in this definition.

(G) Energized electrical systems—Any **alternating current (AC)** or **direct current (DC)** electrical circuit on an assembled aircraft once electrical power is connected, including interior passenger and cargo areas, wheel wells, and tail sections.

(H) Flush cleaning—The removal of contaminants such as dirt, grease, and coatings from an aerospace vehicle or component or coating equipment by passing solvent over, into, or through the item

being cleaned. The solvent may simply be poured into the item cleaned and then drained, or be assisted by air *[or]*, **compressed gas**, hydraulic pressure, or by pumping. **Spray gun cleaning or [H/]hand-wipe cleaning operations** where wiping, scrubbing, mopping, or other hand actions are used are not included in this definition.

(K) High volume low pressure (HVLP) spray equipment—Spray equipment *[that is]* used to apply coating by means of spray gun that operates at ten pounds per square inch gauge (10 psig) of atomizing air pressure or less at the air cap.

(M) Primer—The first layer and any subsequent layers of identically formulated coating applied to the *[surface of an aerospace vehicle or component. Primers are typically used for corrosion prevention, protection from the environment, functional fluid resistance, and adhesion of subsequent coatings]* article to provide corrosion resistance, surface etching, surface leveling, adhesion promotion, or other property depending on the end use or exposure of the final product. Primers that are defined as specialty coatings are not included under this definition.

(N) Self-priming topcoat—A topcoat that is applied directly to *[an uncoated aerospace]* a vehicle or component for purposes of corrosion prevention, environmental protection, and function fluid resistance. More than one (1) layer of identical coating formulation may be applied to the vehicle or component.

(R) Touch-up and repair operation—That portion of the coating operation that is the incidental application of *[coating]* **finishing materials** used to cover minor imperfections in the coating finish or to achieve complete coverage. This definition includes out-of-sequence or out-of-cycle coating.

(U) **Waterborne (water-reducible) coating—Any coating that contains more than five percent (5%) water by weight as applied in its volatile fraction.**

[(U)](V) Definitions of certain terms specified in this rule, other than those specified in this rule section, may be found in 10 CSR 10-6.020.

(3) General Provisions.

(E) Each owner or operator of an aerospace manufacturing and/or rework operation shall comply with the following housekeeping requirements for any affected cleaning operation, unless the cleaning solvent used is an aqueous *[cleaning]* solvent, low vapor pressure hydrocarbon-based cleaning solvent, or contains less than one percent (1%) VOC by weight/./: **Hazardous waste under regulation 10 CSR 25-4.261 that is subject to the hazardous waste generators standards of 10 CSR 25-5.262 or the solvent wipe conditional exclusion requirements of 40 CFR 261.4(a)(26) or (b)(18), as incorporated in 10 CSR 25-4.261, is exempt from the requirements of paragraphs (3)(E)1. through (3)(E)3. below:**

1. Solvent-laden cloth, paper, or any other absorbent applicators used for cleaning shall be placed in bags or other closed containers upon completing their use. These bags and containers must be kept closed at all times except when depositing or removing these materials from the container. The bags and containers used must be of such a design so as to contain the vapors of the cleaning solvent. Cotton-tipped swabs used for very small cleaning operations are exempt from this requirement;

2. All fresh and spent cleaning solvents, except semi-aqueous solvent cleaners, used in aerospace cleaning operations shall be stored in closed containers; and

3. The handling and transfer of cleaning solvent to or from enclosed systems, vats, waste containers, and other cleaning operation equipment that hold or store fresh or spent cleaning solvents shall be conducted in such a manner that spills are minimized.

(F) Each owner or operator of an aerospace manufacturing and/or rework operation utilizing hand-wipe cleaning operations excluding the cleaning of spray gun equipment performed in accordance with subsection (3)(G) shall comply with one (1) of the following:

1. Utilize cleaning solvent solutions that are classified as an aqueous *[cleaning]* solvent and/or a low vapor pressure hydrocarbon-based

cleaning solvent; or

2. Utilize cleaning solvent solutions that have a composite vapor pressure of forty-five (45) mmHg or less at twenty degrees Celsius (20°C).

(G) Each owner or operator of an aerospace manufacturing and/or rework operation shall clean all spray guns used in the application of primers, topcoats (including self-priming topcoats), and specialty coatings utilizing one (1) or more of the following techniques:

1. Enclosed system. **Clean** /S/spray guns *[shall be cleaned in]* within an enclosed system that is closed at all times except when inserting or removing the spray gun. *[Cleaning shall consist of forcing cleaning solvent through the gun.]* If leaks in the system are found, repairs shall be made as soon as practicable, but no later than fifteen (15) days after the leak was found. If the leak is not repaired by the fifteenth day after detection, the cleaning solvent shall be removed and the enclosed cleaner shall be shut down until the leak is repaired or its use is permanently discontinued;

2. Nonatomized cleaning. **Clean** /S/spray guns *[shall be cleaned]* by placing cleaning solvent in the pressure pot and forcing it through the gun with the atomizing cap in place. No atomizing air is to be used. The cleaning solvent from the spray gun shall be directed into a vat, drum, or other waste container that is closed when not in use;

3. Disassembled spray gun cleaning. **Clean** /S/spray guns *[shall be cleaned]* by disassembling and cleaning the components by hand in a vat, which shall remain closed at all times except when in use. Alternatively, the components *[shall]* may be soaked in a vat, which shall remain closed during the soaking period and when not inserting or removing components; and

4. Atomizing cleaning. **Clean** /S/spray guns *[shall be cleaned]* by forcing the cleaning solvent through the gun and directing the resulting atomized spray into a waste container that is fitted with a device designed to capture the atomized cleaning solvent emissions.

(H) Each owner or operator of an aerospace manufacturing and/or rework operation that includes a flush cleaning operation shall empty the used cleaning solvents each time aerospace parts or assemblies, or components of a coating unit with the exception of spray guns are flush-cleaned into an enclosed container or collection system that is kept closed when not in use or into a system with equivalent emission control approved by the director. Aqueous, semi-aqueous, *[and]* low vapor pressure hydrocarbon based solvent materials, **and all wastes that are determined to be hazardous waste under regulation 10 CSR 25-4.261 and that are subject to the hazardous waste generators standards of 10 CSR 25-5.262** are exempt from the requirements of this subsection.

(L) The following cleaning operations are exempt from the requirements of subsection (3)(F) of this rule:

1. Cleaning during the manufacture, assembly, installation, maintenance, or testing of components of breathing oxygen systems that are exposed to the breathing oxygen;

2. Cleaning during the manufacture, assembly, installation, maintenance, or testing of parts, subassemblies, or assemblies that are exposed to strong oxidizers or reducers (e.g., nitrogen tetroxide, liquid oxygen, or hydrazine);

3. Cleaning and surface activation prior to adhesive bonding;

4. Cleaning of electronic parts and assemblies containing electronic parts;

5. Cleaning of aircraft and ground support equipment fluid systems that are exposed to the fluid including air-to-air heat exchangers and hydraulic fluid systems;

6. Cleaning of fuel cells, fuel tanks, and confined spaces;

7. Surface cleaning of solar cells, coating optics, and thermal control surfaces;

8. Cleaning during fabrication, assembly, installation, and maintenance of upholstery, curtains, carpet, and other textile materials used in the interior of the aircraft;

9. Cleaning of metallic and non-metallic materials used in hon-

eycomb cores during the manufacture or maintenance of these cores, and cleaning of the completed cores used in the manufacture or maintenance of aerospace vehicles or components;

10. Cleaning of aircraft transparencies, polycarbonate, or glass substrates;

11. Cleaning and solvent usage associated with research and development, quality control, and laboratory testing;

12. Cleaning operations, using nonflammable liquids, conducted within five feet (5') of energized electrical systems; and

13. Cleaning operations identified as essential uses *[under the Montreal Protocol]* in **40 CFR 82.4** for which the U.S. Environmental Protection Agency has allocated essential use allowances or exemptions.

(4) Reporting and Record Keeping.

(B) Record Keeping Requirements.

1. Each owner or operator of an aerospace manufacture and/or rework operation that applies coatings listed in subsection (3)(A) of this rule shall—

A. Maintain a current list of coatings in use with category and VOC content as applied;

B. Record each coating volume usage on a monthly basis; and

C. Maintain records of monthly volume-weighted average VOC content for each coating type included in averaging for coating operations that achieve compliance through coating averaging under paragraph (3)(B)2. of this rule.

2. Each owner or operator of an aerospace manufacture and/or rework operation that uses cleaning solvents subject to this rule shall—

A. Maintain a list of materials with corresponding water contents for aqueous and semi-aqueous hand-wipe cleaning solvents;

B. Maintain a current list of cleaning solvents in use with their respective vapor pressure or, for blended solvents, VOC composite vapor pressure for all vapor pressure compliant hand-wipe cleaning solvents. This list shall include the monthly amount of each applicable solvent used; and

C. Maintain a current list of exempt hand-wipe cleaning processes for all cleaning solvents with a vapor pressure greater than forty-five (45) mmHg used in exempt hand-wipe cleaning operations. This list shall include the monthly amount of each applicable solvent used.

*[(C)]*3. All records must be kept on-site for a period of five (5) years and made available to the department upon request.

(5) Test Methods.

(A) An owner or operator of an aerospace manufacture and/or rework operation shall determine compliance for coatings which are not waterborne (water-reducible)/, and determine the VOC content of each formulation less water and less exempt solvents as applied using manufacturer's supplied data or Method 24 of 40 CFR *[part]* 60, Appendix A, **as specified in 10 CSR 10-6.030(22)**. If there is a discrepancy between the manufacturer's formulation data and the results of the Method 24 analysis, compliance *[shall be based on]* is determined by the results from the Method 24 analysis. For waterborne (water-reducible) coatings, manufacturer's supplied data alone can be used to determine the VOC content of each formulation.

(B) An owner or operator of an aerospace manufacture and/or rework operation shall determine compliance for cleaning solvents using the following:

1. For aqueous and semi-aqueous *[cleaning]* solvents manufacturers' supplied data shall be used to determine the water content; or

2. For hand-wipe cleaning solvents required in subsection (3)(F) of this rule, manufacturers' supplied data or standard engineering reference texts or other equivalent methods shall be used to determine the vapor pressure or VOC composite vapor pressure for blended cleaning solvents.

(C) An owner or operator of an aerospace manufacture and/or rework operation electing to demonstrate compliance with this rule

by use of control equipment meeting the requirements of paragraph (3)(B)3., shall demonstrate the required capture efficiency in accordance with EPA Methods 18, 25, and/or 25A in 40 CFR 60, Appendix A, as specified in 10 CSR 10-6.030(22).

AUTHORITY: section 643.050, RSMo [Supp. 1998] 2016. Original rule filed July 15, 1999, effective Feb. 29, 2000. Amended: Filed June 21, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed amendment will begin at 9:00 a.m., September 27, 2018. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded to any interested person. Interested persons, whether or not heard, may submit a statement of their views until 5:00 p.m., October 4, 2018. Send online comments via the proposed rules web page www.dnr.mo.gov/proposed-rules, email comments to apcprulespn@dnr.mo.gov, or written comments to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 5—Air Quality Standards and Air Pollution
Control Rules Specific to the St. Louis Metropolitan
Area

PROPOSED AMENDMENT

10 CSR 10-5.330 Control of Emissions From Industrial Surface Coating Operations. The commission proposes to amend sections (1), (2), and (5); and amend subsections (3)(A) through (3)(E), (3)(G) through (3)(K), (4)(A), and (4)(D). If the commission adopts this rule action, the department intends to submit this rule amendment to the U.S. Environmental Protection Agency to replace the current rule that is in the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Proposed Rules website www.dnr.mo.gov/proposed-rules.

PURPOSE: This rule restricts the emissions of volatile organic compounds from industrial surface coating operations. This amendment creates a new surface coating category for the decorative coating of foam products and establishes an appropriate RACT-level emission limit for this type of surface coating operation. This amendment also removes obsolete provisions that were applicable prior to March 1, 2012, removes a reference to a rule that is being rescinded since it is duplicative of a federal rule, removes unnecessary language and use of restrictive words, adds definitions specific to this rule, changes rule language to be consistent with defined terms, and updates incorporations by reference. The evidence supporting the need for this proposed rulemaking, per 536.016, RSMo, is a rule comment form dated March 26, 2014, describing how the surface coating of foam products has been miscategorized under the surface coating of rubber prod-

ucts, and requesting changes to certain terms for consistency, and Executive Order 17-03 Red Tape Reduction Review and related comments.

(1) Applicability.

(A) This rule [shall apply] applies throughout St. Louis City and Jefferson, St. Charles, Franklin, and St. Louis Counties.

(B) This rule [shall apply] applies to any [installation] facility with actual emissions of volatile organic compounds (VOCs) from industrial surface coating operations, including related cleaning activities, of at least three (3) tons per twelve (12)-month rolling period, before consideration of controls.

[(C) This rule is only applicable to the surface coating of manufactured items intended for distribution in commerce to persons other than the person or legal entity performing the surface coating.]

[(D)](C) Exemptions. This rule is not applicable to the following:

1. Motor vehicle refinishing;
2. Customizing top coating of motor vehicles, if production is less than thirty-five (35) vehicles per day;
3. Surface coating that is part of janitorial, building, and [installation] facility maintenance operations;
4. Research and development, performance testing, and quality control of coatings and surface coated products;
5. Aerosol coating[s] products subject to 40 CFR 59 Subpart C or E;
6. Field application of architectural coatings to buildings, building components, and stationary structures;
7. Powder coatings;
8. Surface coating and cleaning of aerospace vehicles or components at an aerospace manufacture or rework [installation] facility that—

A. Is subject to the requirements and/or aerospace-specific exemptions of 10 CSR 10-5.295; or

B. Is not subject to 10 CSR 10-5.295 because the [installation's] facility's potential to emit [volatile organic compounds] VOCs from aerospace surface coating and cleaning is twenty-five (25) tons per year or less;

9. Surface coating and cleaning of wood furniture or wood furniture components at a wood furniture manufacturing [installation] facility that—

A. Is subject to the requirements and/or wood furniture-specific exemptions of 10 CSR 10-5.530; or

B. Is not subject to 10 CSR 10-5.530 because the [installation's] facility's potential to emit [volatile organic compounds] VOCs from wood furniture coating and cleaning is less than twenty-five (25) tons per year;

[10. Surface coating and cleaning operations that are subject to a Reasonably Available Control Technology determination under 10 CSR 10-5.520;]

[11.]10. Application and storage of [traffic] coatings that are subject to the requirements of [10 CSR 10-5.450] 40 CFR 59, Subpart D;

[12.]11. Printing operations that are subject to the requirements of 10 CSR 10-5.340 or 10 CSR 10-5.442;

[13.]12. Surface coating and cleaning of articles used for internal company operations, including, but not limited to, work stands; scaffolding; jigs; tooling; dollies; tow bars; aircraft ground support equipment; portable equipment used for maintenance, testing, fabrication, or repair; toolboxes; storage bins; shelving; and other manufacturing or warehouse support items;

[14.]13. Surface coating operations which do not have a VOC limit in section (3) of this rule;

[15.]14. Adhesives and sealants that contain less than 0.17 pounds of VOC per gallon of coating (less water and exempt compounds) as-applied;

[16.]15. Cyanoacrylate adhesives;

[17.]16. Adhesives, sealants, adhesive primers, and sealant

primers that are supplied by the manufacturer or supplier in containers with a net volume of sixteen (16) fluid ounces or less, or a net weight of one (1) pound or less, except plastic cement welding adhesives and contact adhesives;

/18./17. Contact adhesives that are supplied by the manufacturer or supplier in containers with a net volume of one (1) gallon or less; and

/19./18. Adhesives, sealants, adhesive primers, sealant primers, surface preparation, and cleanup solvents that are used in the following operations:

A. Tire repair operations, provided the adhesive is labeled for tire repair only;

B. Assembly, repair, and manufacture of aerospace **components** or undersea-based weapons systems **components**;

C. **Plastic /S/**solvent welding operations used in the manufacture of medical devices or in the manufacture of medical equipment; and

D. Plaque laminating operations in which adhesives are used to bond clear, polyester acetate laminate to wood with lamination equipment installed prior to July 1, 1992.

[(E)](D) Once *[an installation]* a facility exceeds the applicability level of this rule, it shall remain subject to this rule until it can demonstrate, to the satisfaction of the director, that the actual total VOC emissions from surface coating operations, including related cleaning activities and before consideration of controls, is below three (3) tons per twelve (12)-month rolling period for sixty (60) consecutive months.

(2) Definitions *[of certain terms specified in this rule may be found in 10 CSR 10-6.020]*.

(A) All terms beginning with A.

1. **ABS plastic solvent welding**—A process to weld acrylonitrile-butadiene-styrene pipe.

2. **Actual emissions**—The actual rate of emissions of a pollutant from a source operation is determined as follows:

A. Actual emissions as of a particular date shall equal the average rate, in tons per twelve (12)-month rolling period, at which the source operation or facility actually emitted the pollutant during the previous two (2)-year period and which represents normal operation. A different time period for averaging may be used if the director determines it to be more representative. Actual emissions shall be calculated using actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period;

B. The director may presume that source-specific allowable emissions for a source operation or facility are equivalent to the actual emissions of the source operation or facility; and

C. For source operations or facilities, which have not begun normal operations on the particular date, actual emissions shall equal the potential emissions of the source operation or facility on that date.

3. **Add-on control**—An air pollution control device, such as a thermal oxidizer or carbon adsorber, that reduces pollution in an air stream by destruction or removal before discharge to the atmosphere.

4. **Adhesion primer**—A coating that is applied to a polyolefin part to promote the adhesion of a subsequent coating. An adhesion primer is clearly identified as an adhesion primer or adhesion promoter on its material safety data sheet.

5. **Adhesive**—Any chemical substance that is applied for the purpose of bonding two (2) surfaces together other than by mechanical means. For the purposes of this rule, an adhesive is considered a surface coating.

6. **Adhesive application process**—A series of one (1) or more adhesive applicators and any associated drying area and/or oven wherein an adhesive is applied, dried, and/or cured. An application process ends at the point where the adhesive is dried or cured, or prior to any subsequent application of a different adhesive.

It is not necessary for an application process to have an oven or flash-off area.

7. **Adhesive primer**—A product intended by the manufacturer for application to a substrate, prior to the application of an adhesive, to provide a bonding surface.

8. **Aerospace vehicle or component**—Any fabricated part, processed part, assembly of parts, or completed unit, with the exception of electronic components, of any aircraft including, but not limited to, airplanes, helicopters, missiles, rockets, and space vehicles.

9. **Air-dried coating**—The coatings which are dried by the use of air or forced warm air at temperatures up to ninety degrees Celsius (90°C) (one hundred ninety-four degrees Fahrenheit (194°F)).

10. **Airless spray and air-assisted airless spray**—Any paint spray technology that relies solely on the fluid pressure of the paint to create an atomized paint spray pattern and does not apply any atomizing compressed air to the paint before it leaves the paint nozzle. Air-assisted airless spray uses compressed air to shape and distribute the fan of atomized paint, but still uses fluid pressure to create the atomized paint.

11. **Antifoulant coating**—A coating applied to the underwater portion of a pleasure craft to prevent or reduce the attachment of biological organisms, and registered with the U.S. Environmental Protection Agency as a pesticide under the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136) promulgated as of September 28, 2012, and hereby incorporated by reference in this rule, as published by the Office of the Law Revision Counsel of the House of Representatives. Copies can be obtained from the U.S. Publishing Office Bookstore, 710 N. Capitol Street NW, Washington DC 20401. This rule does not incorporate any subsequent amendments or additions.

12. **Antifoulant sealer/tie coating**—A coating applied over biocidal antifoulant coating for the purpose of preventing release of biocides into the environment and/or to promote adhesion between an antifoulant and a primer or other antifoulant.

13. **As-applied**—The volatile organic compound and solids content of the finishing material that is actually used for coating the substrate. It includes the contribution of materials used for in-house dilution of the finishing material.

14. **As-received**—The condition of a coating as delivered to the user.

15. **Automobile**—A motor vehicle designed to carry up to eight passengers, excluding vans, sport utility vehicles, and motor vehicles designed primarily to transport light loads of property.

16. **Automobile and light-duty truck assembly plant**—A facility which assembles automobiles or light-duty trucks, including coating facilities and processes.

(B) All terms beginning with B.

1. **Baked coating**—A coating that is cured at a temperature at or above one hundred ninety-four degrees Fahrenheit (194°F).

2. **Basecoat**—A coat of colored material, usually opaque, that is applied before graining inks, glazing coats, or other opaque finishing materials and is usually topcoated for protection.

3. **Bedliner**—A multi-component coating applied to a cargo bed after the application of topcoat to provide additional durability and chip resistance. For automobile and light-duty truck assembly coating facilities a bedliner is applied outside of the topcoat operation.

4. **Business machine**—A device that uses electronic or mechanical methods to process information, perform calculations, print or copy information, or convert sound into electrical impulses for transmission, including devices listed in standard industrial classification numbers 3572, 3573, 3574, 3579, 3661, and photocopy machines, a subcategory of standard industrial classification number 3861.

(C) All terms beginning with C.

1. Camouflage coating—A coating, used principally by the military, to conceal equipment from detection.

2. Can coating—A surface coating applied to a cylindrical steel or aluminum container. The container can be two (2) pieces (made by a drawn and wall-ironed shallow cup with only one (1) end) or three (3) pieces (made by a rectangular material rolled into a cylinder and the attachment of two (2) end pieces).

3. Can end—A can part manufactured from metal substrate for the purpose of sealing the ends of can bodies.

4. Capture device—A hood, enclosed room, floor sweep, or other means of containing or collecting solvent emissions or other pollutants into a duct so that the pollutant can be directed to an add-on control device such as an incinerator or carbon adsorber.

5. Capture efficiency—The fraction of all organic vapors or other pollutants generated by a process that is directed to a control device.

6. Capture system—One or more capture devices intended to collect emissions generated by a coating operation in the use of coatings or cleaning materials, both at the point of application and at subsequent points where emissions from the coatings and cleaning materials occur, such as flash-off, drying, or curing. Multiple capture devices that collect emissions generated by a coating operation are considered a single capture system.

7. Carbon adsorption system—A device containing adsorbent material (for example, activated carbon, aluminum, silica gel); an inlet and outlet for exhaust gases; and a system to regenerate the saturated adsorbent. The carbon adsorption system must provide for the proper disposal or reuse of all volatile organic compounds adsorbed.

8. Cavity wax—A coating applied into the cavities of the vehicle primarily for the purpose of enhancing corrosion protection.

9. Ceramic tile installation adhesive—Any adhesive intended by the manufacturer for use in the installation of ceramic tiles.

10. Class I hardboard—A hardboard panel that meets the specifications of American National Standard A135.5-2004, as approved by the American National Standards Institute in 2004, and hereby incorporated by reference in this rule, as published by the Composite Panel Association, 18922 Premiere Court, Gaithersburg, MD 20879-1574. This rule does not incorporate any subsequent amendments or additions.

11. Class II finish—A finish applied to hardboard panels that meets the specifications of American National Standard A135.5-2004, as approved by the American National Standards Institute in 2004, and hereby incorporated by reference in this rule, as published by the Composite Panel Association, 18922 Premiere Court, Gaithersburg, MD 20879-1574. This rule does not incorporate any subsequent amendments or additions.

12. Cleaning material—A solvent used to remove contaminants and other materials, such as dirt, grease, oil, and dried (e.g., depainting) or wet coating from a substrate before or after coating application or from equipment associated with a coating operation, such as spray booths, spray guns, racks, tanks, and hangers. Thus, it includes any cleaning materials used on substrates or equipment or both.

13. Cleaning operations—Processes of cleaning products, product components, tools, equipment, or general work areas during production, repair, maintenance, or servicing, including, but not limited to, spray gun cleaning, spray booth cleaning, large and small manufactured component cleaning, parts cleaning, equipment cleaning, line cleaning, floor cleaning, and tank cleaning, at affected facilities.

14. Cleanup solvent—A VOC-containing material used in cleaning operations.

15. Clear coat—A coating which lacks color and opacity or is transparent and uses the undercoat as a reflectant base or undertone color. This term also includes corrosion preventative coatings used for the interior of drums or pails.

16. Coating—A protective, decorative, or functional material applied in a thin layer to a surface. Such materials include, but are not limited to, paints, topcoats, varnishes, sealers, stains, washcoats, basecoats, inks, and temporary protective coatings.

17. Coating line purging—The process of flushing paint out and cleaning the spray lines when changing colors or to remove undesired material. It includes use of air and solvents to clean the lines.

18. Coating solids (or solids)—The part of the coating that remains after the coating is dried or cured; solids content is determined using data from Method 24 of Appendix A-7 to 40 CFR 60 as specified in 10 CSR 10-6.030(22).

19. Coating solids deposited—The coating solids which remain on the substrate or object being painted.

20. Contact adhesive—A contact adhesive does not include rubber cements that are primarily intended for use on paper substrates. Contact adhesive also does not include vulcanizing fluids that are designed and labeled for tire repair only. A contact adhesive is an adhesive that—

A. Is designed for application to both surfaces to be bonded together;

B. Is allowed to dry before the two (2) surfaces are placed in contact with each other;

C. Forms an immediate bond that is impossible, or difficult, to reposition after both adhesive-coated surfaces are placed in contact with each other; and

D. Does not need sustained pressure or clamping of surfaces after the adhesive-coated surfaces have been brought together using sufficient momentary pressure to establish full contact between both surfaces.

21. Control device—Any equipment that reduces the quantity of a pollutant that is emitted to the air. The device may destroy or secure the pollutant for subsequent recovery.

22. Control device efficiency—The ratio of the pollution released by a control device and the pollution introduced to the control device, expressed as a fraction.

23. Control system—The combination of capture and control devices used to reduce emissions to the atmosphere.

24. Cove base—A flooring trim unit, generally made of vinyl or rubber, having a concave radius on one (1) edge and a convex radius on the opposite edge that is used in forming a junction between the bottom wall course and the floor or to form an inside corner.

25. Cove base installation adhesive—An adhesive intended by the manufacturer to be used for the installation of cove base or wall base on a wall or vertical surface at floor level.

26. Cyanoacrylate adhesive—An adhesive with a cyanoacrylate content of at least ninety-five percent (95%) by weight.

(D) All terms beginning with D.

1. Deadener—A coating applied to selected vehicle surfaces primarily for the purpose of reducing the sound of road noise in the passenger compartment.

2. Dip coating—A method of applying coatings in which the part is submerged in a tank filled with the coatings.

3. Drum—Any cylindrical container of thirteen to one hundred ten (13-110)-gallon capacity.

(E) All terms beginning with E.

1. Electric dissipating coating—A coating that rapidly dissipates a high-voltage electric charge.

2. Electric-insulating and thermal-conducting coating—A coating that displays an electrical insulation of at least one thousand (1,000) volts DC per mil on a flat test plate and an average thermal conductivity of at least twenty-seven hundredths British thermal units (0.27 Btu) per hour-foot-degree-Fahrenheit.

3. Electric-insulating varnish—A non-convertible-type coating applied to electric motors, components of electric motors, or power transformers, to provide electrical, mechanical, and environmental protection or resistance.

4. **Electrodeposition primer (EDP)**—A protective, corrosion-resistant waterborne primer on exterior and interior surfaces that provides thorough coverage of recessed areas. It is a dip coating method that uses an electrical field to apply or deposit the conductive coating onto the part. The object being painted acts as an electrode that is oppositely charged from the particles of paint in the dip tank.

5. **Electromagnetic interference/radio frequency interference (EMI/RFI) shielding**—A coating used on electrical or electronic equipment to provide shielding against electromagnetic interference (EMI), radio frequency interference (RFI), or static discharge.

6. **Electrostatic spray application**—A spray application method that uses an electrical potential to increase the transfer efficiency of the coatings.

7. **Electrostatic preparation coat**—A coating that is applied to a plastic part solely to provide conductivity for the subsequent application of a prime, topcoat, or other coating through the use of electrostatic application methods. An electrostatic preparation coat is clearly identified as an electrostatic preparation coat on its material safety data sheet.

8. **Enamel**—A coating which cures by chemical cross-linking of its base resin and is not resoluble in its original solvent.

9. **End sealing compound**—A coating applied to the perimeter of can ends that functions as a gasket when the end is assembled on the can.

10. **Etching filler**—A coating for metal that contains less than twenty-three percent (23%) solids by weight and at least one-half percent (0.5%) acid by weight, and is used instead of applying a pretreatment coating followed by a primer.

11. **Extreme high-gloss coating**—A coating applied to—

A. **Pleasure craft** which, when tested according to ASTM D523 - 14, as specified in 10 CSR 10-6.040, shows a reflectance of ninety-five percent (90%) or more on a sixty degree (60°) meter; or

B. **Metal and plastic parts** that are not components of pleasure craft, which, when tested according to ASTM D523 - 14, as specified in 10 CSR 10-6.040, shows a reflectance of seventy-five percent (75%) or more on a sixty degree (60°) meter.

12. **Extreme-performance coating**—A coating used on a metal or plastic surface where the coated surface is, in its intended use, subject to the following:

A. **Chronic exposure** to corrosive, caustic, or acidic agents, chemicals, chemical fumes, chemical mixtures, or solutions;

B. **Repeated exposure** to temperatures in excess of two hundred fifty degrees Fahrenheit (250°F); or

C. **Repeated heavy abrasion**, including mechanical wear and repeated scrubbing with industrial grade solvents, cleansers, or scouring agents.

(F) All terms beginning with F.

1. **Fabric coating**—A coating applied to a textile substrate by dipping or by means of a blade or roll.

2. **Facility**—All contiguous or adjoining property that is under common ownership or control, including properties that are separated only by a road or other public right-of-way.

3. **Facility maintenance operations**—The routine repair or renovation (including the surface coating) of the tools, equipment, machinery, and structures that comprise the infrastructure of the affected facility and that are necessary for the facility to function in its intended capacity.

4. **Final repair**—The operations performed and coating(s) applied to completely-assembled motor vehicles or to parts that are not yet on a completely assembled vehicle to correct damage or imperfections in the coating.

5. **Finish primer/surfacer**—A coating applied to pleasure craft with a wet film thickness of less than ten (10) mils prior to the application of a topcoat for purposes of providing corrosion

resistance, adhesion of subsequent coatings, a moisture barrier, or promotion of a uniform surface necessary for filling in surface imperfections.

6. **Flash-off area**—Flash-off area means the portion of a coating process between the coating application station and the next coating application station or drying oven where solvent begins to evaporate from the coated substrate.

7. **Flat wood paneling coating**—Wood paneling products that are any interior, exterior, or tileboard (class I hardboard) panel to which a protective, decorative, or functional material or layer has been applied.

8. **Flexible primer**—A coating that is required to comply with engineering specifications for impact resistance, mandrel bend, or elongation as defined by the original equipment manufacturer.

9. **Flexible vinyl**—Non-rigid polyvinyl chloride plastic with at least five percent (5%) by weight plasticizer content.

10. **Floor covering installation adhesive, indoor**—An adhesive intended by the manufacturer for use in the installation of wood flooring, carpet, resilient tile, vinyl tile, vinyl-backed carpet, resilient sheet, and roll or artificial grass. Adhesives used to install ceramic tile and perimeter bonded sheet flooring with vinyl backing onto a nonporous substrate, such as flexible vinyl, are excluded from this category.

11. **Floor covering installation adhesive, outdoor**—Any adhesive intended by the manufacturer for use in the installation of floor covering that is not in an enclosure and that is exposed to ambient weather conditions during normal use.

12. **Flow coating**—A method of applying coatings in which the part is carried through a chamber containing numerous nozzles which direct unatomized streams of coatings from many different angles onto the surface of the part.

13. **Flush cleaning**—The removal of contaminants such as dirt, grease, and coatings from a vehicle, component, or coating equipment by passing solvent over, into, or through the item being cleaned. The solvent may simply be poured into the item cleaned and then drained, or be assisted by air, compressed gas, hydraulic pressure, or by pumping. Spray gun cleaning or hand-wipe cleaning operations where wiping, scrubbing, mopping, or other hand actions are used are not included in this definition.

14. **Fog coat**—A coating that is applied to a plastic part for the purpose of color matching without masking a molded-in texture.

(G) All terms beginning with G.

1. **Gasket/gasket-sealing material**—A fluid applied to coat a gasket or replace and perform the same function as a gasket. Automobile and light-duty truck gasket/gasket-sealing material includes room temperature vulcanization seal material.

2. **Glass-bonding primer**—A primer applied to windshield or other glass, or to body openings, to prepare the glass or body opening for the application of glass-bonding adhesives or the installation of adhesive-bonded glass. Glass-bonding primer includes glass-bonding/cleaning primers that perform both functions (cleaning and priming of the windshield or other glass, or body openings) prior to the application of adhesive or the installation of adhesive-bonded glass.

3. **Gloss reducer**—A coating that is applied to a plastic part solely to reduce the shine of the part.

(H) All terms beginning with H.

1. **Hardboard**—A panel manufactured primarily from inter-felted lingo-cellulosic fibers which are consolidated under heat and pressure in a hot press.

2. **Hardwood plywood**—Plywood whose surface layer is a veneer of hardwood.

3. **Heat-resistant coating**—A coating that must withstand a temperature of at least four hundred degrees Fahrenheit (400°F) during normal use.

4. **Heavy-duty vehicle (HDV)**—Any motor vehicle rated at

more than eight thousand five hundred pounds (8,500 lbs) gross vehicle weight rating.

5. High-bake coating—A coating which is designed to cure only at temperatures of more than one hundred ninety-four degrees Fahrenheit (194 °F).

6. High-build primer/surfacers—A coating applied to pleasure craft with a wet film thickness of ten (10) mils or more prior to the application of a topcoat for purposes of providing a moisture barrier, corrosion resistance, adhesion of subsequent coatings, or promoting a uniform surface necessary for filling in surface imperfections.

7. High-gloss coating—A coating applied to pleasure craft which, when tested by ASTM D523 - 14, as specified in 10 CSR 10-6.040, shows a reflectance of eighty-five percent (85%) or more on a sixty-degree (60°) meter.

8. High-performance architectural coating—A coating used to protect architectural subsections and which meets the requirements of the Architectural Aluminum Manufacturer Association's publication number AAMA 2604-05, Voluntary Specification, Performance Requirements, and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels or AAMA 2605-05, Voluntary Specification, Performance Requirements, and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels, as published July of 2005, and hereby incorporated by reference, as published by the American Architectural Manufacturers Association, 1827 Walden Office Square, Suite 550, Schaumburg, IL 60173. This rule does not incorporate any subsequent amendments or additions.

9. High-temperature coating—A coating that is certified to withstand a temperature of one thousand degrees Fahrenheit (1,000 °F) for twenty-four (24) hours.

10. High-volume low-pressure (HVLP) spray equipment—Spray equipment that is used to apply coating by means of spray gun that operates at ten pounds per square inch gauge (10.0 psig) of atomizing air pressure or less at the air cap.

(I) All terms beginning with I.

1. Industrial surface coating operation—The surface coating of manufactured items intended for distribution in commerce to persons other than the person or legal entity performing the surface coating.

2. Ink jet technology—A printing method in which an electronic output device transfers variable data, in the form of a digital image, from a computer to a variety of substrates.

3. Interior body spray—A coating sprayed on the interior surface of a can body to provide a protective film between the product and the can.

(J) All terms beginning with J.

(K) All terms beginning with K.

(L) All terms beginning with L.

1. Laminate—A product made by bonding together two (2) or more layers of material.

2. Light-duty truck—Vans, sport utility vehicles, and motor vehicles designed primarily to transport light loads of property with gross vehicle weight rating of eight thousand five hundred pounds (8,500 lbs.) or less.

3. Low-bake coating—A coating designed to cure at temperatures below one hundred ninety-four degrees Fahrenheit (194 °F).

4. Lubricating wax/compound—A protective lubricating material applied to vehicle hubs and hinges.

(M) All terms beginning with M.

1. Magnetic data storage disk coating—A coating used on a metal disk which stores data magnetically.

2. Material safety data sheet (MSDS)—The chemical, physical, technical, and safety information document supplied by the manufacturer of the coating, solvent, or other chemical product.

3. Medical device or equipment—An instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent, or

other similar article, including any component or accessory that meets one (1) of the following conditions:

A. It is intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease;

B. It is intended to affect the structure or any function of the body; or

C. It is defined in the National Formulary or the United States Pharmacopoeia, or any supplement to them.

4. Metal to urethane/rubber molding or casting adhesive—Any adhesive intended by the manufacturer to bond metal to high density or elastomeric urethane or molded rubber materials to fabricate products such as rollers for computer printers or other paper handling equipment.

5. Metallic coating—A coating which contains more than five (5) grams of metal particles per liter of coating as-applied. Metal particles are pieces of a pure elemental metal or a combination of elemental metals.

6. Military specification coating—A coating which has a formulation approved by a United States Military Agency for use on military equipment.

7. Mold seal coating—The initial coating applied to a new mold or a repaired mold to provide a smooth surface which, when coated with a mold-release coating, prevents products from sticking to the mold.

8. Motor vehicle—Any self-propelled vehicle.

9. Motor vehicle coatings—Coatings applied to motor vehicles and motor vehicle parts at facilities that are not automobile or light-duty truck assembly coating facilities.

10. Motor vehicle refinishing—The process of coating motor vehicles, or their parts, that is subsequent to the original coating applied at an original equipment manufacturing plant.

11. Multi-colored coating—A coating which exhibits more than one (1) color when applied, and which is packaged in a single container and applied in a single coat.

12. Multi-component coating—A coating requiring the addition of a separate reactive resin, commonly known as a catalyst or hardener, before application to form an acceptable dry film.

13. Multipurpose construction construction adhesive—Any adhesive intended by the manufacturer for use in the installation or repair of various construction materials, including but not limited to drywall, subfloor, panel, fiberglass reinforced plastic (FRP), ceiling tile and acoustical tile.

(N) All terms beginning with N.

1. Natural finish hardwood plywood panel—A panel whose original grain pattern is enhanced by essentially transparent finishes frequently supplemented by fillers and toners.

(O) All terms beginning with O.

1. One-component coating—A coating that is ready for application as it comes out of its container to form an acceptable dry film. A thinner, necessary to reduce the viscosity, is not considered a component.

2. Optical coating—A coating applied to an optical lens.

3. Overvarnish—A can coating applied to reduce the coefficient of friction (to allow for proper mobility of the can on conveyor tracks), provide gloss, and protect the finish against abrasion and corrosion.

(P) All terms beginning with P.

1. Paint—A pigmented surface coating using volatile organic compounds as the major solvent and thinner which converts to a relatively opaque solid film after application as a thin layer.

2. Pan-backing coating—A coating applied to the surfaces of pots, pans, or other cooking implements that are exposed directly to a flame or other heating elements.

3. Paper, film, and foil coating operation—A web coating line that applies a continuous layer of coating material across essentially the entire width or any portion of the width of a web substrate to—

A. Provide a covering, finish, or functional or protective

layer to a substrate;

B. Saturate a substrate for lamination; or

C. Provide adhesion between two (2) substrates for lamination.

4. Perimeter bonded sheet flooring installation—The installation of sheet flooring with vinyl backing onto a nonporous substrate using an adhesive designed to be applied only to a strip of up to four inches (4") wide around the perimeter of the sheet flooring.

5. Plastic—A synthetic material chemically formed by the polymerization of organic substances and capable of being molded, extruded, cast into various shapes and films, or drawn into filaments.

6. Plastic solvent welding adhesive—Any adhesive intended by the manufacturer for use to dissolve the surface of plastic to form a bond between mating surfaces.

7. Plastic solvent welding adhesive primer—Any primer intended by the manufacturer for use to prepare plastic substrates prior to bonding or welding.

8. Pleasure craft—A marine vessel which is manufactured or operated primarily for recreational purposes or leased, rented, or chartered to a person or business for recreational purposes.

9. Pleasure craft coating—A marine coating, except unsaturated polyester resin (fiberglass) coatings, applied by brush, spray, roller, or other means to a pleasure craft.

10. Polyvinyl chloride plastic or PVC plastic—A polymer of the chlorinated vinyl monomer that contains 57% chlorine.

11. Porous material—A substance that has tiny openings, often microscopic, in which fluids may be absorbed or discharged, including, but not limited to, paper and corrugated paperboard. For the purposes of this rule, porous material does not include wood.

12. Powder coating—Any surface coating which is applied as a dry powder and is fused into a continuous coating film with heat.

13. Prefabricated architectural component coating—A coating applied to metal parts and products which are to be used as an architectural structure.

14. Pressure sensitive tape and label coating operation—Any number or combination of adhesive, release, or precoat coating applicators, flash-off areas, and ovens which coat a continuous web, located between a web unwind station and a web rewind station, to produce pressure sensitive tape and label materials.

15. Pretreatment coating—A coating which contains no more than twelve percent (12%) solids by weight, but at least one-half percent (0.5%) acids by weight, is used to provide surface etching, and is applied directly to metal surfaces to provide corrosion resistance, adhesion, and ease of stripping.

16. Pretreatment wash primer—A coating which contains no more than twenty-five percent (25%) solids by weight, but at least one-tenth of a percent (0.1%) acids by weight, is used to provide surface etching, and is applied directly to fiberglass and metal surfaces to provide corrosion resistance and adhesion of subsequent coatings.

17. Primer—The first layer and any subsequent layers of identically formulated coating applied to the article to provide corrosion resistance, surface etching, surface leveling, adhesion promotion, or other property depending on the end use or exposure of the final product. Primers that are defined as specialty coatings are not included under this definition.

18. Primer-surfacer—An intermediate protective coating applied over the electrodeposition primer and under the topcoat at an automobile or light-duty truck assembly coating facility. Primer-surfacer provides adhesion, protection, and appearance properties to the total finish. Primer-surfacer may also be called guide coat or surfacer.

19. Printed interior panel—A panel whose grain or natural surface is obscured by fillers and basecoats upon which a simulated grain or decorative pattern is printed.

(Q) All terms beginning with Q.

(R) All terms beginning with R.

1. Reinforced plastic composite—A composite material consisting of plastic reinforced with fibers.

2. Related cleaning activity—The removal of coating residue or other unwanted materials from equipment related to coating operations as well as the cleaning of spray guns, transfer line, tanks, and the interior of spray booths.

3. Repair coating—A coating used to re-coat portions of a previously coated product which has sustained mechanical damage to the coating following normal coating operations.

4. Roller coating—The application of a coating to a substrate by means of hard rubber or metal rolls.

5. Rubber—Any natural or manmade rubber substrate, including, but not limited to, styrene-butadiene rubber, polychloroprene (neoprene), butyl rubber, nitrile rubber, chlorosulfonated polyethylene, and ethylene propylene diene terpolymer.

(S) All terms beginning with S.

1. Safety-indicating coating—A coating which changes physical characteristics, such as color, to indicate unsafe conditions.

2. Sealer—A high viscosity material, generally, but not always, applied in the paint shop after the body has received an electrodeposition primer coating and before the application of subsequent coatings (e.g., primer-surfacer). The primary purpose of sealer is to fill body joints completely so that there is no intrusion of water, gases, or corrosive materials into the passenger area of the body compartment. Such materials are also referred to as sealant, sealant primer, or caulk.

3. Sealant—Any material with adhesive properties that is formulated primarily to fill, seal, waterproof, or weatherproof gaps or joints between two (2) surfaces. Sealants include sealant primers and caulks.

4. Sheet basecoat—A coating applied to either side of flat metal sheets before they are formed into three-piece cans and can ends to protect the interior surface or provide an exterior background coating.

5. Sheet rubber lining installation—The process of applying sheet rubber liners by hand to metal or plastic substrates to protect the underlying substrate from corrosion or abrasion. These operations also include laminating sheet rubber to fabric by hand.

6. Shock-free coating—A coating applied to electrical components to protect the user from electric shock. The coating has characteristics of being of low capacitance and high resistance and having resistance to breaking down under high voltage.

7. Side-seam spray—A coating applied to the interior and/or exterior of the welded or soldered seam of a three-piece can body to protect the exposed metal.

8. Silicone-release coating—Any coating which contains silicone resin and is intended to prevent food from sticking to metal surfaces such as baking pans.

9. Single-ply roof membrane—A prefabricated single sheet of rubber, normally ethylene-propylenediene terpolymer, that is field applied to a building roof using one (1) layer of membrane material. For the purposes of this rule, single-ply roof membrane does not include membranes prefabricated from ethylene-propylenediene monomer (EPDM).

10. Single-ply roof membrane adhesive primer—A primer labeled for use to clean and promote adhesion of the single-ply roof membrane seams or splices prior to bonding.

11. Single-ply roof membrane installation/repair adhesive—An adhesive labeled for use in the installation or repair of single-ply roof membrane. Installation includes, as a minimum, attaching the edge of the membrane to the edge of the roof and applying flashings to vents, pipes, or ducts that protrude through the membrane. Repair includes gluing the edges of torn membrane together, attaching a patch over a hole, and reapplying flashings to vents, pipes, or ducts installed through the membrane.

12. Solar-absorbent coating—A coating which has as its

prime purpose the absorption of solar radiation.

13. Solid film lubricant—A very thin coating consisting of a binder system containing as its chief pigment material one (1) or more of the following:

- A. Molybdenum;
- B. Graphite;
- C. Polytetrafluoroethylene (PTFE); and
- D. Other solids that act as a dry lubricant between closely or tightly fitting surfaces.

14. Solvent—Organic materials which are liquid at standard conditions and which are used as solvers, viscosity reducers, or cleaning agents.

15. Specialty coating—A coating that, even though it meets the definition of a primer, topcoat, or self-priming topcoat, has additional performance criteria beyond those of primers, topcoats, and self-priming topcoats for specific applications. These performance criteria may include, but are not limited to, temperature or fire resistance, substrate compatibility, anti-reflection, temporary protection, or marking, sealing, adhesively joining substrates, or enhanced corrosion protection.

16. Stencil coating—An ink or a pigmented coating which is rolled or brushed onto a template or stamp to add identifying letters, symbols, and/or numbers.

17. Structural glazing—A process that includes the application of adhesive to bond glass, ceramic, metal, stone, or composite panels to exterior building frames.

18. Surface coating unit—One (1) or more coating applicators and any associated drying area and/or oven wherein a coating is applied, dried, and/or cured. A coating unit ends at the point where the coating is dried or cured, or prior to any subsequent application of a different coating. It is not necessary for a coating unit to have an oven or flash-off area.

(T) All terms beginning with T.

1. Texture coating—A coating that is applied to a plastic part which, in its finished form, consists of discrete raised spots of the coating.

2. Thin metal laminating adhesive—An adhesive intended by the manufacturer for use in bonding multiple layers of metal to metal or metal to plastic in the production of electronic or magnetic components in which the thickness of the bond line(s) is less than 0.25 millimeters.

3. Thinner—An organic solvent that is added to a coating after the coating is received from the supplier.

4. Thin particleboard—A manufactured board 0.64 centimeters (1/4 inch) or less in thickness made of individual wood particles which have been coated with a binder and formed into flat sheets by pressure.

5. Tileboard—A premium interior wall paneling product made of hardboard that is used in high-moisture areas of the home, such as kitchens and bathrooms, and meets the specifications for Class I hardboards as approved by the American National Standards Institute.

6. Tire repair—A process that includes expanding a hole, tear, fissure, or blemish in a tire casing by grinding or gouging, applying adhesive, and filling the hole or crevice with rubber.

7. Topcoat—The final coating or coating system in which one (1) or more coats are applied for the purposes of appearance or protection of the substrate. Nonpermanent final finishes are not topcoats.

8. Touch-up coating—A coating used to cover minor coating imperfections appearing after the main coating operation.

9. Transfer efficiency—Ratio of the amount of coating solids transferred onto a product to the total of coating solids used. In any surface coating operation, TE is the ratio of solids in a coating that adhere on a target surface to the total solids used in the process for coating the target surface.

10. Translucent coating—A coating which contains binders and pigment, and is formulated to form a colored, but not

opaque, film.

11. Trunk interior coating—A coating applied to the trunk interior to provide chip protection.

12. Two-component coating—A coating requiring the addition of a separate reactive resin, commonly known as a catalyst, before application to form an acceptable dry film.

13. Two-piece can exterior coating—A coating applied to the exterior surface of a two-piece can to protect the metal surface or provide a background for lithograph or printing operations.

14. Two-piece can exterior end coating—A coating applied to the exterior surface of a two-piece can end.

(U) All terms beginning with U.

1. Underbody coating—A coating applied to the undercarriage or firewall to prevent corrosion and/or provide chip protection.

2. Undersea-based weapons systems components—The fabrication of parts, assembly of parts or completed units of any portion of a missile launching system used on undersea ships.

(V) All terms beginning with V.

1. Vacuum-metalizing coating—The undercoat applied to the substrate on which the metal is deposited or the overcoat applied directly to the metal film. Vacuum metalizing/physical vapor deposition (PVD) is the process whereby metal is vaporized and deposited on a substrate in a vacuum chamber.

2. Vinyl coating—A functional, decorative, or protective topcoat or printing applied to vinyl-coated fabric or vinyl sheets.

3. Volatile organic compound (VOC)— See definition in 10 CSR 10-6.220.

(W) All terms beginning with W.

1. Waterproof resorcinol glue—A two (2)-part resorcinol-resin-based adhesive designed for applications where the bond line must be resistant to conditions of continuous immersion in fresh or salt water.

2. Weatherstrip adhesive—An adhesive applied to weatherstripping materials to bond the weatherstrip material to the surface of the vehicle.

3. Web coating line—Any number of work stations, of which one (1) or more applies a continuous layer of coating material across the entire width or any portion of the width of a web substrate, and any associated curing/drying equipment between an unwind or feed station and a rewind or cutting station.

(X) All terms beginning with X.

(Y) All terms beginning with Y.

(Z) All terms beginning with Z.

(3) General Provisions. General provisions for specific coatings may be found in the following subsections of section (3) of this rule:

Coating	Subsection
Large Appliance Coatings	(3)(A)
Metal Furniture Coatings	(3)(B)
Automobile and Light-Duty Truck Assembly Coatings	(3)(C)
Paper, Film, and Foil Coatings	(3)(D)
Magnet Wire Coatings	(3)(E)
Coil Coatings	(3)(F)
Can Coatings	(3)(G)
Vinyl and Fabric Coatings	(3)(H)
Flat Wood Paneling Coatings	(3)(I)
Miscellaneous Metal and Plastic Parts Coatings	(3)(J)
Industrial Adhesive Application	(3)(K)

(A) Large Appliance Coatings.

1. The requirements in this subsection apply to the surface coating of doors, cases, lids, panels, and interior support parts of the following residential and commercial products:

- A. Washers;
- B. Dryers;
- C. Ranges;

- D. Refrigerators;
- E. Freezers;
- F. Water heaters;
- G. Dishwashers;
- H. Trash compactors;
- I. Air conditioners; and
- J. Other similar products.

2. Emission limits. **No owner or operator of a surface coating unit subject to this subsection may cause, allow, or permit the discharge into the ambient air of any VOCs in excess of the following, as delivered to the coating applicator(s):**

[A. Prior to March 1, 2012, no owner or operator of a surface coating unit subject to this subsection may cause, allow, or permit the discharge into the ambient air of any VOCs in excess of the following, as delivered to the coating applicator(s):

Large Appliance Coatings	
Coating Category	Emission Limit pounds of VOC per gallon of coating (minus water and exempt compounds)
Topcoat	2.8
Final Repair	6.5

B. On or after March 1, 2012, no owner or operator of a surface coating unit subject to this subsection may cause, allow, or permit the discharge into the ambient air of any VOCs in excess of the following, as delivered to the coating applicator(s):]

Large Appliance Coatings		
Coating Category	Emission Limit pounds of VOC per gallon of coating (minus water and exempt compounds)	
	Baked Coating	Air-Dried Coating
General		
<i>[General,] One-Component Coating</i>	2.3	2.3
<i>[General,] Multi-Component Coating</i>	2.3	2.8
Extreme High-Gloss Coating	3.0	2.8
Extreme-Performance Coating	3.0	3.5
Heat-Resistant Coating	3.0	3.5
Metallic Coating	3.5	3.5
Pretreatment Coatings	3.5	3.5
Solar-Absorbent Coating	3.0	3.5
Repair and Touch-Up Coatings	6.5	6.5

3. Method and determination of compliance. The emission limits in paragraph (3)(A)2. of this rule shall be achieved through one (1) of the following:

A. VOC content of coatings. Determine the daily volume-weighted average VOC content of all coatings used in a surface coating unit, expressed as pounds of VOC per gallon of coating (minus water and exempt compounds) per subparagraph (5)(C)3.A. of this rule. The surface coating unit is in compliance if this value is less than or equal to the emission limits in paragraph (3)(A)2. of this rule;

B. Combination of VOC content of coatings and add-on con-

trols. Calculate the required control system efficiency per paragraph (5)(C)4. of this rule. The surface coating unit is in compliance if the actual overall control system efficiency is greater than or equal to the required control system efficiency; or

C. Control system. If a control system is used to achieve compliance, the overall control system efficiency must be ninety percent (90%) or greater.

4. Application equipment. *[On or after March 1, 2012, o/One (1) or a combination of the following equipment shall be used for coating application, unless achieving compliance by using an add-on control system per subparagraph (3)(A)3.C. of this rule:*

- A. Electrostatic *[equipment]* spray application;
- B. High-volume low-pressure (HVLP) spray equipment;
- C. Flow coating;
- D. Roller coating;
- E. Dip coating, including electrodeposition;
- F. Airless spray;
- G. Air-assisted airless spray;
- H. Ink jet technology; and

I. Other coating application method capable of achieving a transfer efficiency equivalent or better than achieved by HVLP spraying.

5. Work practices. *[On or after March 1, 2012, w/Work practices shall be used to minimize VOC emissions from solvent storage, mixing operations, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices [shall] include, but are not [be] limited to, the following:*

A. Store all VOC-containing coatings, thinners, and cleaning materials in closed containers;

B. Ensure that mixing and storage containers used for VOC-containing coatings, thinners, coating related waste, and cleaning materials are kept closed at all times except when depositing or removing these materials;

C. Minimize spills of VOC-containing coatings, thinners, and cleaning materials;

D. Clean up spills immediately;

E. Convey any coatings, thinners, and cleaning materials in closed containers or pipes from one (1) location to another; and

F. Minimize VOC emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

6. The VOC limits in paragraph (3)(A)2. of this rule do not apply to the following types of coatings and coating operations:

- A. Stencil coatings;
- B. Safety-indicating coatings;
- C. Solid film lubricants; or
- D. Electric-insulating and thermal-conducting coatings.

(B) Metal Furniture Coatings.

1. The requirements in this subsection apply to surface coating of any furniture made of metal or any metal part that will be assembled with other metal, wood, fabric, plastic, or glass parts to form a furniture piece.

2. Emission limits. **No owner or operator of a surface coating unit subject to this subsection may cause, allow, or permit the discharge into the ambient air of any VOCs in excess of the following, as delivered to the coating applicator(s):**

[A. Prior to March 1, 2012, no owner or operator of a surface coating unit subject to this subsection may cause, allow, or permit the discharge into the ambient air of any VOCs in excess of three (3.0) pounds of VOC per gallon of coating (minus water and exempt compounds) as delivered to the coating applicator(s).]

B. On or after March 1, 2012, no owner or operator of a surface coating unit subject to this subsection may cause, allow, or permit the discharge into the ambient air of any VOCs in excess of the following, as delivered to the coating applicator(s):]

Metal Furniture Coatings		
Coating Category	Emission Limit pounds of VOC per gallon of coating (minus water and exempt compounds)	
	Baked Coating	Air-Dried Coating
General		
<i>[General,] One-Component Coating</i>	2.3	2.3
<i>[General,] Multi-Component Coating</i>	2.3	2.8
Extreme High-Gloss Coating	3.0	2.8
Extreme-Performance Coating	3.0	3.5
Heat-Resistant Coating	3.0	3.5
Metallic Coating	3.5	3.5
Pretreatment Coatings	3.5	3.5
Solar-Absorbent Coating	3.0	3.5

3. Method and determination of compliance. The emission limits in paragraph (3)(B)2. of this rule shall be achieved through one (1) of the following:

A. VOC content of coatings. Determine the daily volume-weighted average VOC content of all coatings used in a surface coating unit, expressed as pounds of VOC per gallon of coating (minus water and exempt compounds) per subparagraph (5)(C)3.A. of this rule. The surface coating unit is in compliance if this value is less than or equal to the emission limits in paragraph (3)(B)2. of this rule;

B. Combination of VOC content of coatings and add-on controls. Calculate the required control system efficiency per paragraph (5)(C)4. of this rule. The surface coating unit is in compliance if the actual overall control system efficiency is greater than or equal to the required control system efficiency; or

C. Control system. If a control system is used to achieve compliance, the overall control system efficiency must be ninety percent (90%) or greater.

4. Application equipment. *[On or after March 1, 2012, o/One (1) or a combination of the following equipment shall be used for coating application, unless achieving compliance by using an add-on control system per subparagraph (3)(B)3.C. of this rule:*

A. Electrostatic *[equipment]* spray application;

B. HVLP spray equipment;

C. Flow coating;

D. Roller coating;

E. Dip coating, including electrodeposition;

F. Airless spray;

G. Air-assisted airless spray;

H. Ink jet technology; and

I. Other coating application method capable of achieving a transfer efficiency equivalent or better than achieved by HVLP spraying.

5. Work practices. *[On or after March 1, 2012, w/Work practices shall be used to minimize VOC emissions from solvent storage, mixing operations, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices [shall] include, but are not [be] limited to, the following:*

A. Store all VOC-containing coatings, thinners, and cleaning materials in closed containers;

B. Ensure that mixing and storage containers used for VOC-containing coatings, thinners, coating related waste, and cleaning materials are kept closed at all times except when depositing or removing these materials;

C. Minimize spills of VOC-containing coatings, thinners, and cleaning materials;

D. Clean up spills immediately;

E. Convey any coatings, thinners, and cleaning materials in closed containers or pipes from one (1) location to another; and

F. Minimize VOC emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

6. The VOC limits in paragraph (3)(B)2. of this rule do not apply to the following types of coatings and coating operations:

A. Stencil coatings;

B. Safety-indicating coatings;

C. Solid film lubricants; and

D. Electric-insulating and thermal-conducting coatings.

(C) Automobile and Light-Duty Truck Assembly Coatings.

1. The requirements in this subsection apply to automobile and light-duty truck surface coating operations performed in an automobile or light-duty truck assembly *[installation]* plant.

2. Emission limits. **No owner or operator of an automobile or light-duty truck assembly plant may cause, allow, or permit the discharge into the ambient air of any VOC in excess of the following:**

[A. Prior to March 1, 2012, no owner or operator of an automobile or light duty truck assembly installation may cause, allow, or permit the discharge into the ambient air of any VOC in excess of the following:

Automobile and Light Duty Truck Assembly Coatings	
Coating Category	Emission Limit
Topcoat	15.1 pounds of VOC per gallon of coating solids deposited
Spray Primer or Primer Surfacer	15.1 pounds of VOC per gallon of coating solids deposited
Electrodeposition Primer	1.4 pounds of VOC per gallon of coating solids deposited
Final Repair	4.8 pounds of VOC per gallon of coating (minus water and exempt compounds)
Miscellaneous Metal Parts, Extreme Performance, and Air Dried Coatings	3.5 pounds of VOC per gallon of coating (minus water and exempt compounds)
All Other Coatings	3.0 pounds of VOC per gallon of coating (minus water and exempt compounds)

B. On or after March 1, 2012, no owner or operator of an automobile or light duty truck assembly installation may cause, allow, or permit the discharge into the ambient air of any VOC in excess of the following:]

Automobile and Light-Duty Truck Assembly Coatings			
Coating Category	Emission Limit		
	$R_T < 0.040$	$0.040 \leq R_T < 0.160$	$R_T \geq 0.160$
Electrodeposition primer (EDP)	No VOC Emission Limit	$0.7 \times 350^{0.160-R_T}$ pounds of VOC per gallon of coating solids deposited	0.7 pounds of VOC per gallon of coating solids deposited
Primer-surfacer	12.0 pounds of VOC per gallon of coating solids deposited		
Topcoat	12.0 pounds of VOC per gallon of coating solids deposited		
Combined Primer-Surfacer and Topcoat	12.0 pounds of VOC per gallon of coating solids deposited		
Final repair	4.8 pounds of VOC per gallon of coating (minus water and exempt compounds)		

Miscellaneous Automobile and Light-Duty Truck Materials	
Material	Emission Limit pounds of VOC per gallon of coating (minus water and exempt compounds)
[Automobile and light-duty truck g]Glass-bonding primer	7.5
[Automobile and light-duty truck a]Adhesive	2.1
[Automobile and light-duty truck c]Cavity wax	5.4
[Automobile and light-duty truck s]Sealer	5.4
[Automobile and light-duty truck d]Deadener	5.4
[Automobile and light-duty truck g]Gasket/gasket-sealing material	1.7
[Automobile and light-duty truck u]Underbody coating	5.4
[Automobile and light-duty truck t]Trunk interior coating	5.4
[Automobile and light-duty truck b]Bedliner	1.7
[Automobile and light-duty truck w]Weatherstrip adhesive	6.3
[Automobile and light-duty truck l]Lubricating wax/compound	5.8

3. Method and determination of compliance. The emission limits in paragraph (3)(C)2. of this rule shall be achieved through the following:

A. Spray primer; primer-surfacer; topcoat; and combined primer-surfacer and topcoat. The VOC emission rate, expressed as pounds of VOC per gallon of coating solids deposited, is determined by the procedures in the [U.S. Environmental Protection Agency (EPA) document] *Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat Operations* (EPA-453/R-08-002), dated September 2008, and hereby incorporated by reference, as published by the U.S. Environmental Protection Agency. Copies can be obtained from the U.S. Publishing Office Bookstore, 710 N. Capitol Street NW, Washington, DC 20401. This rule does not incorporate any subsequent amendments or additions. The surface coating unit is in compliance if the emission rate is less than or equal to the emission limit in paragraph (3)(C)2.

of this rule;

B. Electrodeposition primer (EDP). Determine the monthly volume-weighted average VOC emission rate of the EDP coating unit, expressed as pounds of VOC per gallon of coating solids deposited, per subparagraph (5)(C)3.D. of this rule. The EDP coating unit is in compliance if this value is less than or equal to the emission limit in paragraph (3)(C)2. of this rule;

C. Final repair coatings. Determine the daily volume-weighted average VOC content of all coatings used in a surface coating unit, expressed as pounds of VOC per gallon of coating (minus water and exempt compounds) per subparagraph (5)(C)3.A. of this rule. The surface coating unit is in compliance if this value is less than or equal to the emission limits in paragraph (3)(C)2. of this rule; and

D. All other coatings. Determine the monthly volume-weighted average VOC content of all coatings used in a surface coating unit, expressed as pounds of VOC per gallon of coating (minus water and exempt compounds) per subparagraph (5)(C)3.E. of this rule. The surface coating unit is in compliance if this value is less than or equal to the emission limit in paragraph (3)(C)2. of this rule.

4. Work practices and work practice plan.

A. Work practices. [On or after March 1, 2012, w/Work practices shall be used to minimize VOC emissions from storage, mixing operations, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices [shall] include, but are not [be] limited to, the following:

(I) Store all VOC-containing coatings, thinners, and cleaning materials in closed containers;

(II) Ensure that mixing and storage containers used for VOC-containing coatings, thinners, coating related waste, and cleaning materials are kept closed at all times except when depositing or removing these materials;

(III) Minimize spills of VOC-containing coatings, thinners, and cleaning materials;

(IV) Clean up spills immediately;

(V) Convey any coatings, thinners, and cleaning materials in closed containers or pipes from one (1) location to another; and

(VI) Minimize VOC emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

B. Work practice plan. [Installations] owners and operators of facilities subject to subparagraph (3)(C)4.A. of this rule shall develop and implement a work practice plan to minimize VOC emissions from cleaning and purging of equipment associated with all coating operations for which emission limits are specified in paragraph (3)(C)2. of this rule. The plan shall specify practices and procedures to ensure that VOC emissions from the following operations are minimized:

(I) Vehicle body wiping;

(II) Coating line purging;

(III) Flush[ing] cleaning of coating systems;

(IV) Cleaning of spray booth grates;

(V) Cleaning of spray booth walls;

(VI) Cleaning of spray booth equipment;

(VII) Cleaning external spray booth areas; and

(VIII) Other housekeeping measures, such as keeping solvent-laden rags in closed containers.

(D) Paper, Film, and Foil Coatings.

1. The requirements in this subsection apply to paper, film, and foil coating operations, with the exception of the following:

A. Paper, film, and foil surface coating units with potential to emit below twenty-five (25) tons per year of VOC from coating, prior to controls;

B. Coating performed on or in-line with any offset lithographic, screen, letterpress, flexographic, rotogravure, or digital printing press that is part of a printing process; and

C. Size presses and on-machine coaters on papermaking machines that apply sizing or water-based clays.

2. Emission limits. No owner or operator of a surface coating unit subject to this subsection may cause, allow, or permit the discharge into the ambient air of any VOCs in excess of the following, as delivered to the coating applicator(s):

[A. Prior to March 1, 2012, no owner or operator of a surface coating unit subject to this subsection may cause, allow, or permit the discharge into the ambient air of any VOCs in excess of two and nine-tenths (2.9) pounds of VOC per gallon of coating (minus water and exempt compounds) as delivered to the coating applicator(s).]

B. On or after March 1, 2012, no owner or operator of a surface coating unit subject to this subsection may cause, allow, or permit the discharge into the ambient air of any VOCs in excess of the following, as delivered to the coating applicator(s):]

Paper, Film, and Foil Coatings	
Coating Category	Emission Limit pounds of VOC per pound of coating solids
Pressure sensitive tape and label coating operation	0.2
Paper, film, and foil [surface] coating (not including pressure sensitive tape and label coating operations)	0.4

3. Method and determination of compliance. The emission limits in paragraph (3)(D)2. of this rule shall be achieved through one (1) of the following:

A. VOC content of coatings. Determine the daily mass-weighted average VOC content of all coatings used in a surface coating unit, expressed as pounds of VOC per pound of coating solids per subparagraph (5)(C)3.C. of this rule. The surface coating unit is in compliance if this value is less than or equal to the emission limits in paragraph (3)(D)2. of this rule; or

[(I) Prior to March 1, 2012. Determine the daily volume-weighted average VOC content of all coatings used in a surface coating unit, expressed as pounds of VOC per gallon of coating (minus water and exempt compounds) per subparagraph (5)(C)3.A. of this rule. The surface coating unit is in compliance if this value is less than or equal to the emission limit in paragraph (3)(D)2. of this rule.]

[(II) On or after March 1, 2012. Determine the daily mass-weighted average VOC content of all coatings used in a surface coating unit, expressed as pounds of VOC per pound of coating solids per subparagraph (5)(C)3.C. of this rule. The surface coating unit is in compliance if this value is less than or equal to the emission limits in paragraph (3)(D)2. of this rule; or]

B. Control system. If a control system is used to achieve compliance, the overall control system efficiency must be ninety percent (90%) or greater.

4. Work practices. *[On or after March 1, 2012, w/]*Work practices shall be used to minimize VOC emissions from solvent storage, mixing operations, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices *[shall]* include, but are not *[be]* limited to, the following:

A. Store all VOC-containing coatings, thinners, and cleaning materials in closed containers;

B. Ensure that mixing and storage containers used for VOC-containing coatings, thinners, coating related waste, and cleaning materials are kept closed at all times except when depositing or removing these materials;

C. Minimize spills of VOC-containing coatings, thinners, and cleaning materials;

D. Clean up spills immediately;

E. Convey any coatings, thinners, and cleaning materials in closed containers or pipes from one (1) location to another; and

F. Minimize VOC emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

(E) Magnet Wire Coatings.

1. The requirements in this subsection apply to the coating of electric/ally/-insulating varnish or enamel to aluminum or copper wire for use in electrical machinery.

2. Emission limits. No owner or operator of a surface coating unit subject to this subsection may cause, allow, or permit the discharge into the ambient air of any VOCs in excess of one and seven-tenths (1.7) pounds of VOC per gallon of coating (minus water and exempt compounds) as delivered to the coating applicator(s).

3. Method and determination of compliance. The emission limits in paragraph (3)(E)2. of this rule shall be achieved through one (1) of the following:

A. VOC content of coatings. Determine the daily volume-weighted average VOC content of all coatings used in a surface coating unit, expressed as pounds of VOC per gallon of coating (minus water and exempt compounds), per subparagraph (5)(C)3.A. of this rule. The surface coating unit is in compliance if this value is less than or equal to the emission limit in paragraph (3)(E)2. of this rule;

B. Combination of VOC content of coatings and add-on controls. Calculate the required control system efficiency per paragraph (5)(C)4. of this rule. The surface coating unit is in compliance if the actual overall control system efficiency is greater than or equal to the required control system efficiency; or

C. Control system. If a control system is used to achieve compliance, the overall control system efficiency must be ninety percent (90%) or greater.

(G) Can Coatings.

1. The requirements in this subsection apply to the surface coating of cans.

2. Emission limits. No owner or operator of a surface coating unit subject to this subsection may cause, allow, or permit the discharge into the ambient air of any volatile organic compounds, as delivered to the coating applicator(s), in excess of the following:

[Can Coatings	
Coating Category	Emission Limit pounds of VOC per gallon of coating (minus water and exempt compounds)
2-Piece Exterior Sheet Basecoat	2.8
2- and 3-Piece Interior Body Spray	4.2
2-Piece End Exterior	4.2
3-Piece Side Seam	5.5
End Seal Compound	3.7]

Can Coatings	
Coating Category	Emission Limit pounds of VOC per gallon of coating (minus water and exempt compounds)
Sheet Basecoat	2.8
Overvarnish	2.8
Two-Piece Can Exterior Coating	2.8
Interior Body Spray	4.2
Two-Piece Can Exterior End Coating	4.2
Side-Seam Spray	5.5
End Sealing Compound	3.7

3. Method and determination of compliance. The emission limits in paragraph (3)(G)2. of this rule shall be achieved through one (1) of the following:

A. VOC content of coatings. Determine the daily volume-weighted average VOC content of all coatings used in a surface coating unit, expressed as pounds of VOC per gallon of coating (minus water and exempt compounds), per subparagraph (5)(C)3.A. of this rule. The surface coating unit is in compliance if this value is less than or equal to the emission limit in paragraph (3)(G)2. of this rule;

B. Combination of VOC content of coatings and add-on controls. Calculate the required control system efficiency per paragraph (5)(C)4. of this rule. The surface coating unit is in compliance if the actual overall control system efficiency is greater than or equal to the required control system efficiency; or

C. Control system. If a control system is used to achieve compliance, the overall control system efficiency must be ninety percent (90%) or greater.

(H) Vinyl and Fabric Coatings.

1. The requirements in this subsection apply to vinyl coating and fabric coating.

2. Emission limits. No owner or operator of a surface coating unit subject to this subsection may cause, allow, or permit the discharge into the ambient air of any *[volatile organic compounds]* VOCs, as delivered to the coating applicator(s), in excess of the following:

Vinyl and Fabric Coatings	
Coating Category	Emission Limit pounds of VOC per gallon of coating (minus water and exempt compounds)
Vinyl	3.8
Fabric	2.9

3. Method and determination of compliance. The emission limits in paragraph (3)(H)2. of this rule shall be achieved through one (1) of the following:

A. VOC content of coatings. Determine the daily volume-weighted average VOC content of all coatings used in a surface coating unit, expressed as pounds of VOC per gallon of coating (minus water and exempt compounds), per subparagraph (5)(C)3.A. of this rule. The surface coating unit is in compliance if this value is less than or equal to the emission limit in paragraph (3)(H)2. of this rule;

B. Combination of VOC content of coatings and add-on controls. Calculate the required control system efficiency per paragraph (5)(C)4. of this rule. The surface coating unit is in compliance if the actual overall control system efficiency is greater than or equal to the required control system efficiency; or

C. Control system. If a control system is used to achieve compliance, the overall control system efficiency must be ninety percent (90%) or greater.

(I) Flat Wood Paneling Coatings.

1. The requirements in this subsection apply to the coating of the following:

- A. Printed interior panels made of hardwood plywood and thin particleboard;
- B. Natural finish hardwood plywood panels;
- C. Hardboard paneling with Class II finishes;
- D. Exterior siding; and
- E. Tileboard.

2. Emission limits. *[On or after March 1, 2012, n]*No owner or operator of a surface coating unit subject to this subsection may cause, allow, or permit the discharge into the ambient air of any VOCs in excess of two and one-tenths (2.1) pounds of VOC per gallon of coating (minus water and exempt compounds) as delivered to the coating applicator(s).

3. Method and determination of compliance. The emission limits in paragraph (3)(I)2. of this rule shall be achieved through one (1) of the following:

A. VOC content of coatings. Determine the daily volume-weighted average VOC content of all coatings used in a surface coating unit, expressed as pounds of VOC per gallon of coating (minus water and exempt compounds), per subparagraph (5)(C)3.A. of this rule. The surface coating unit is in compliance if this value is less than or equal to the emission limit in paragraph (3)(I)2. of this rule;

B. Combination of VOC content of coatings and add-on controls. Calculate the required control system efficiency per paragraph (5)(C)4. of this rule. The surface coating unit is in compliance if the actual overall control system efficiency is greater than or equal to the required control system efficiency; or

C. Control system. If a control system is used to achieve compliance, the overall control system efficiency must be ninety percent (90%) or greater.

4. Work practices. *[On or after March 1, 2012, w]*Work practices shall be used to minimize VOC emissions from solvent storage, mixing operations, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices *[shall]* include, but **are not** *[be]* limited to, the following:

A. Store all VOC-containing coatings, thinners, and cleaning materials in closed containers;

B. Ensure that mixing and storage containers used for VOC-containing coatings, thinners, coating related waste, and cleaning materials are kept closed at all times except when depositing or removing these materials;

C. Minimize spills of VOC-containing coatings, thinners, and cleaning materials;

D. Clean up spills immediately;

E. Convey any coatings, thinners, and cleaning materials in closed containers or pipes from one (1) location to another; and

F. Minimize VOC emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

(J) Miscellaneous Metal and Plastic Parts Coatings.

1. The requirements in this subsection apply to the surface coating of all other miscellaneous metal and plastic parts including, but not limited to, the following:

- A. Large and small farm implements and machinery;
- B. Railroad cars;
- C. Small household appliances;
- D. Office equipment;
- E. Commercial and industrial machinery and equipment;
- F. Any other industrial category that coats metal parts or products under the Standard Industrial Classification Code of major groups #33, #34, #35, #36, #37, #38, and #39;
- G. Fabricated metal products;
- H. Molded plastic parts;
- I. Automotive or transportation equipment;
- J. Interior or exterior automotive parts;
- K. Construction equipment;
- L. Motor vehicle accessories;
- M. Bicycles and sporting goods;
- N. Toys;
- O. Recreational vehicles;
- P. Pleasure craft (recreational boats);
- Q. Extruded aluminum structural components;
- R. Heavy-duty vehicles;
- S. Lawn and garden equipment;
- T. Business machines;
- U. Laboratory and medical equipment;
- V. Electronic equipment;
- W. Steel drums;
- X. Metal pipes; and
- Y. Prefabricated architectural components when the coating is applied in a surface coating unit *[as defined in 10 CSR 10-6.020]*.

2. Emission limits. **No owner or operator of a surface coating**

unit subject to this subsection may cause, allow, or permit the discharge into the ambient air of any VOCs in excess of the following, as delivered to the coating applicator(s):

[A. Prior to March 1, 2012, no owner or operator of a surface coating unit subject to this subsection may cause, allow, or permit the discharge into the ambient air of any VOCs in excess of the following, as delivered to the coating applicator(s):

Coating Category	Emission Limit pounds of VOC per gallon of coating (minus water and exempt compounds)
<i>Metal Parts</i>	
<i>Clear Coat</i>	4.3
<i>Extreme Performance Coatings</i>	3.5
<i>Air Dried Coatings</i>	3.5
<i>All Other Coatings</i>	3.0
<i>Plastic Parts</i>	3.5
<i>Railroad Cars</i>	3.5
<i>Farm Implements and Machinery</i>	3.5
<i>Heavy Duty Trucks</i>	3.5
<i>Mail Boxes and Shutters</i>	3.5

B. On or after March 1, 2012, no owner or operator of a surface coating unit subject to this subsection may cause, allow, or permit the discharge into the ambient air of any VOCs in excess of the following, as delivered to the coating applicator(s):]

Metal Parts and Products Coatings		
Coating Category	Emission Limit pounds of VOC per gallon of coating (minus water and exempt compounds)	
	Air-Dried Coating	Baked Coating
General		
<i>[General,] One- Component Coating</i>	2.8	2.3
<i>[General,] Multi- Component Coating</i>	2.8	2.3
Camouflage Coating	3.5	3.5
Clear Coat	4.3	4.3
Electric-Insulating Varnish	3.5	3.5
Etching Filler	3.5	3.5
Extreme High-Gloss Coating	3.5	3.0
Extreme-Performance Coating	3.5	3.0
Heat-Resistant Coating	3.5	3.0
High-Performance Architectural Coating	6.2	6.2
High-Temperature Coating	3.5	3.5
Metallic Coating	3.5	3.5
Military Specification Coating	2.8	2.3
Mold Seal Coating	3.5	3.5
Pan-Backing Coating	3.5	3.5
Prefabricated Architectural Component Coating	3.5	2.3
Pretreatment Coatings	3.5	3.5
Repair and Touch-Up Coatings	3.5	3.0
Silicone-Release Coating	3.5	3.5
Solar-Coating Absorbent	3.5	3.0
Vacuum-Metalizing Coating	3.5	3.5
Drum, New, Exterior	2.8	2.8
Drum, New, Interior	3.5	3.5
Drum, Reconditioned, Exterior	3.5	3.5
Drum, Reconditioned, Interior	4.2	4.2

Plastic and Rubber Parts and Products Coatings	
Coating Category	Emission Limit pounds of VOC per gallon of coating (minus water and exempt compounds)
Automotive/Transportation	
High-Bake Coating Interior and Exterior Parts	
Flexible Primer	4.5
Non-Flexible Primer	3.5
Basecoat	4.3
Clear Coat	4.0
Non- Basecoat/Clear Coat	4.3
Low-Bake Coating /Air-Dried Coating , Exterior Parts	
Primer	4.8
Basecoat	5.0
Clear Coat	4.5
Non- Basecoat/Clear Coat	5.0
Low-Bake Coating /Air-Dried Coating , Interior Parts	5.0
Touch-Up and Repair Coatings	5.2
Business Machine	
Primer	2.9
Topcoat	2.9
Texture Coat	2.9
Fog Coat	2.2
Touch-Up and Repair Coatings	2.9
Plastic and Rubber, All Other	
General	
[General,] One-Component Coating	2.3
[General,] Multi-Component Coating	3.5
Electric Dissipating Coating and Shock-Free Coating	6.7
Extreme-Performance Coating	3.5
Metallic Coating	3.5
Military Specification Coating	
[One (1) Pack] One-Component Coating	2.8
[Two (2) Pack] Two-Component Coating	3.5
Mold Seal Coating	6.3
Multi-Colored Coating	5.7
Optical Coating	6.7
Polyurethane Shoe Sole	6.7
Vacuum-Metalizing Coating	6.7
Decorative Coating of Foam Products, Dip Coated, Air Dried	5.7

Pleasure Craft Coatings	
Coating Category	Emission Limit pounds of VOC per gallon of coating (minus water and exempt compounds)
Extreme High-Gloss [Topcoat] Coating	5.0
High-Gloss [Topcoat] Coating	3.5
Pretreatment Wash Primer	6.5
Finish Primer/Surfacer	5.0
High-Build Primer/Surfacer	2.8
Aluminum Substrate Antifoulant Coating	4.7
Other Substrate Antifoulant Coating	3.3
Antifoulant Sealer/Tie Coating	3.5
All Other Coatings	3.5

Motor Vehicle [Materials] Coatings	
Coating Category	Emission Limit pounds of VOC per gallon of coating (minus water and exempt compounds)
[Motor Vehicle] Cavity Wax	5.4
[Motor Vehicle] Sealer	5.4
[Motor Vehicle] Deadener	5.4
[Motor Vehicle] Gasket/Gasket-Sealing Material	1.7
[Motor Vehicle] Underbody Coating	5.4
[Motor Vehicle] Trunk Interior Coating	5.4
[Motor Vehicle] Bedliner	1.7
[Motor Vehicle] Lubricating Wax/Compound	5.8

3. Method and determination of compliance. The emission limits in paragraph (3)(J)2. of this rule shall be achieved through one (1) of the following:

A. VOC content of coatings. Determine the daily volume-weighted average VOC content of all coatings used in a surface coating unit, expressed as pounds of VOC per gallon of coating (minus water and exempt compounds), per subparagraph (5)(C)3.A. of this rule. The surface coating unit is in compliance if this value is less than or equal to the emission limit in paragraph (3)(J)2. of this rule;

B. Combination of VOC content of coatings and add-on controls. Calculate the required control system efficiency per paragraph (5)(C)4. of this rule. The surface coating unit is in compliance if the actual overall control system efficiency is greater than or equal to the required control system efficiency; or

C. Control system. If a control system is used to achieve compliance, the overall control system efficiency must be ninety percent (90%) or greater.

4. Application equipment. [On or after March 1, 2012, o/One (1) or a combination of the following equipment shall be used for coating application, unless achieving compliance by using an add-on control device per subparagraph (3)(J)3.C. of this rule:

- A. Electrostatic [equipment] spray application;
- B. HVLP spray equipment;
- C. Flow coating;
- D. Roller coating;
- E. Dip coating, including electrodeposition;
- F. Airless spray;

- G. Air-assisted airless spray;
 - H. Ink jet technology; and
 - I. Other coating application method capable of achieving a transfer efficiency equivalent or better than achieved by HVLP spraying.
5. Work practices. *[On or after March 1, 2012, w/*Work practices shall be used to minimize VOC emissions from solvent storage, mixing operations, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices *[shall]* include, but **are** not *[be]* limited to, the following:
- A. Store all VOC-containing coatings, thinners, and cleaning materials in closed containers;
 - B. Ensure that mixing and storage containers used for VOC-containing coatings, thinners, coating related waste, and cleaning materials are kept closed at all times except when depositing or removing these materials;
 - C. Minimize spills of VOC-containing coatings, thinners, and cleaning materials;
 - D. Clean up spills immediately;
 - E. Convey any coatings, thinners, and cleaning materials in closed containers or pipes from one (1) location to another; and
 - F. Minimize VOC emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.
6. For metal parts coatings, the VOC limits in paragraph (3)(J)2. of this rule do not apply to the following types of coatings and coating operations:
- A. Stencil coatings;
 - B. Safety-indicating coatings;
 - C. Solid film lubricants;
 - D. Electric-insulating and thermal-conducting coatings;
 - E. Magnetic data storage disk coatings; and
 - F. Plastic extruded onto metal parts to form a coating.
7. For metal parts coatings, the application equipment requirements in paragraph (3)(J)4. of this rule do not apply to the following types of coatings and coating operations:
- A. Touch-up coatings;
 - B. Repair coatings; and
 - C. Textured coatings.
8. For plastic parts coatings, the VOC limits in paragraph (3)(J)2. of this rule do not apply to the following types of coatings and coating operations:
- A. Touch-up and repair coatings;
 - B. Stencil coatings applied on clear or transparent substrates;
 - C. Clear or translucent coatings;
 - D. Coatings applied at a paint manufacturing *[installation]* **facility** while conducting performance tests on the coatings;
 - E. Any individual coating category used in volumes less than fifty (50) gallons in any one (1) year, if substitute compliant coatings are not available, provided that the total usage of all such coatings does not exceed two hundred (200) gallons per year, per *[installation]* **facility**;
 - F. Reflective coating applied to highway cones;
 - G. Mask coatings that are less than one-half (0.5) millimeter thick (dried) and the area coated is less than twenty-five (25) square inches;
 - H. Electromagnetic interference and radio frequency interference (EMI/RFI) shielding coatings; and
 - I. Heparin-benzalkonium chloride (HBAC)-containing coatings applied to medical devices, provided that the total usage of all such coatings does not exceed one hundred (100) gallons per year, per *[installation]* **facility**.
9. For plastic parts coatings, the application equipment requirements in paragraph (3)(J)4. of this rule do not apply to airbrush operations using five (5) gallons or less per year of coating.
10. For automobile, transportation, or business machine plastic parts coatings, the VOC limits in paragraph (3)(J)2. of this rule do

not apply to the following types of coatings and coating operations:

- A. Texture coatings;
- B. Vacuum metalizing coatings;
- C. Gloss reducers;
- D. Texture adhesion primers;
- E. Electrostatic preparation coatings;
- F. Resist coatings; and
- G. Stencil coatings.

11. For pleasure craft surface coating operations, the application equipment requirements in paragraph (3)(J)4. of this rule do not apply to extreme high-gloss coatings.

12. The limits for military specification coatings in subparagraph (3)(J)2.B. of this rule do not apply to coatings that meet the following criteria:

A. The coating is **only** applied to military equipment used for national defense;

B. The coating performance is critical to the successful operation of the military equipment; **and**

C. The coating is mandated in a specification or contract and a substitution of coatings that meet the VOC limits in subparagraph (3)(J)2.B. of this rule is prohibited~~;~~ *and*.

[D. The director grants approval for the use of the coating at the installation.]

13. The limits for pleasure craft coatings in subparagraph (3)(J)2.B. do not apply to pleasure craft touch-up and repair coatings supplied by the manufacturer or supplier in containers with a net volume of one (1) liter or less.

(K) Industrial Adhesive Application.

1. The requirements in this subsection apply to adhesive application processes.

2. Emission limits.

A. *[On or after March 1, 2012, n/*No owner or operator of an adhesive application process subject to this subsection may cause, allow, or permit the discharge into the ambient air of any VOCs in excess of the following, as delivered to the coating applicator(s):

Category	Emission Limit pounds of VOC per gallon of coating (minus water and exempt compounds)
Adhesives Applied to the Specific Substrates	
Reinforced Plastic Composites	1.7
Flexible Vinyl	2.1
Metal	0.3
Porous Material (Except Wood)	1.0
Rubber	2.1
Wood	0.3
Other Substrates	2.1
Specialty Adhesive Application Processes	
Ceramic Tile Installation	1.1
Contact Adhesive	2.1
Cove Base Installation Adhesive	1.3
Floor Covering Installation Adhesive , Indoor	1.3
Floor Covering Installation Adhesive , Outdoor	2.1
[Floor Covering Installation,] Perimeter Bonded Sheet [Vinyl] Flooring Installation	5.5
Metal to Urethane/Rubber Molding or Casting	7.1
Motor Vehicle	
[Motor Vehicle] Adhesive	2.1
[Motor Vehicle] Weatherstrip Adhesive	6.3
Multipurpose Construction	1.7
ABS Plastic Solvent Welding[, ABS]	3.3
Plastic Solvent Welding, Except ABS Plastic Solvent Welding	4.2
Sheet Rubber Lining Installation	7.1
Single-Ply Roof Membrane Installation/Repair, Except EPDM Glue	2.1
Structural Glazing	0.8
Thin Metal Laminating	6.5
Tire Repair	0.8
Waterproof Resorcinol Glue	1.4
Adhesive Primer Application Processes	
[Motor Vehicle] Glass-Bonding Primer (Motor Vehicle)	7.5
Plastic Solvent Welding Adhesive Primer	5.4
Single-Ply Roof Membrane Adhesive Primer	2.1
Other Adhesive Primer	2.1

B. The VOC limits in subparagraph (3)(K)2.A. of this rule for adhesives or adhesive primers applied to particular substrates shall apply as follows:

(I) If an adhesive is subject to a specific VOC limit in sub-

paragraph (3)(K)2.A., the specific limit is applicable rather than an adhesive-to-substrate limit; and

(II) When an adhesive is used to bond dissimilar substrates, the applicable substrate category with the highest VOC content *[shall be]* **determines** the limit.

3. Method and determination of compliance. The emission limits in paragraph (3)(K)2. of this rule shall be achieved through one (1) of the following:

A. VOC content of coatings. Determine the daily volume-weighted average VOC content of all coatings used in an adhesive application process, expressed as pounds of VOC per gallon of coating (minus water and exempt compounds) per subparagraph (5)(C)3.A. of this rule. The adhesive application process is in compliance if this value is less than or equal to the emission limits in paragraph (3)(K)2. of this rule;

B. Combination of VOC content of coatings and add-on controls. Calculate the required control system efficiency per paragraph (5)(C)4. of this rule. The adhesive application process is in compliance if the actual overall control system efficiency is greater than or equal to the required control system efficiency; or

C. Control system. If a control system is used to achieve compliance, the overall control system efficiency must be eighty-five percent (85%) or greater.

4. Application equipment. *[On or after March 1, 2012, o/One]* (1) or a combination of the following equipment shall be used for adhesive application, unless achieving compliance by using an add-on control device per subparagraph (3)(K)3.C. of this rule:

A. Electrostatic spray **application**;

B. HVLP spray **equipment**;

C. Flow coating;

D. Roller coating or hand application, including non-spray application methods similar to hand- or mechanically-powered caulking gun, brush, or direct hand application;

E. Dip coating, including electrodeposition;

F. Airless spray;

G. Air-assisted airless spray;

H. Ink jet technology; and

I. Other coating application method capable of achieving a transfer efficiency equivalent or better than achieved by HVLP spraying.

5. Work practices. *[On or after March 1, 2012, w/Work]* practices shall be used to minimize VOC emissions from solvent storage, mixing operations, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices *[shall]* include, but **are not [be]** limited to, the following:

A. Store all VOC-containing coatings, thinners, and cleaning materials in closed containers;

B. Ensure that mixing and storage containers used for VOC-containing coatings, thinners, coating related waste, and cleaning materials are kept closed at all times except when depositing or removing these materials;

C. Minimize spills of VOC-containing coatings, thinners, and cleaning materials;

D. Clean up spills immediately;

E. Convey any coatings, thinners, and cleaning materials in closed containers or pipes from one (1) location to another; and

F. Minimize VOC emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

(4) Reporting and Record Keeping.

(A) The owner or operator of a surface coating unit covered under this rule shall keep records as necessary to determine compliance. Records kept should be appropriate for the facility, their products, and operations. These may include, as applicable, one (1) or more of the following:

1. Current list of coatings used and the VOC content as-applied;

2. Daily volume usage of each coating;
 3. Records of the weighted average VOC content for each coating type included in averaging for coating operations that achieve compliance through coating VOC content or a combination of coating VOC content and control system;
 4. Annual VOC emissions from surface coating equipment cleaning; and
 5. All test results to determine capture efficiency, control efficiency, and coating properties.
- (D) Records required under subsections (4)(A) through (4)(C) of this rule shall be retained by the owner or operator for a minimum of five (5) years. *These records shall be* and made available to the director upon request.

(5) Test Methods.

(A) Test Methods for Control Systems. Owners or operators demonstrating compliance with the provisions of this rule via a control system shall determine the overall control system efficiency as the product of the capture efficiency and control device efficiency, using the following test methods:

1. The VOC concentration of gaseous air streams shall be determined with a test consisting of three (3) separate runs, each lasting a minimum of sixty (60) minutes using one (1) of the following methods as specified by 40 CFR 60, Appendix A [*Reference Methods*] in 10 CSR 10-6.030(22):

A. Method 18—Measurement of Gaseous Organic Compound Emissions by Gas Chromatography;

B. Method 25—Determination of Total Gaseous Non-methane Organic Emissions as Carbon; or

C. Method 25A—Determination of Total Gaseous Organic Concentration Using Flame Ionization Analyzer;

2. Sample and velocity traverses shall be determined by using one (1) of the following methods as specified by 40 CFR 60, Appendix A [*Reference Methods*] in 10 CSR 10-6.030(22):

A. Method 1—Sample and Velocity Traverses for Stationary Sources; or

B. Method 1A—Sample and Velocity Traverses for Stationary Sources with Small Stacks or Ducts;

3. Velocity and volumetric flow rates shall be determined by using one (1) of the following methods as specified by 40 CFR 60, Appendix A [*Reference Methods*] in 10 CSR 10-6.030(22):

A. Method 2—Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube);

B. Method 2A—Direct Measurement of Gas Volume Through Pipes and Small Ducts;

C. Method 2C—Determination of Stack Gas Velocity and Volumetric Flow Rate in Small Stacks or Ducts (Standard Pitot Tube);

D. Method 2D—Measurement of Gas Volumetric Flow Rates in Small Pipes and Ducts;

E. Method 2F—Determination of Stack Gas Velocity and Volumetric Flow Rate With Three-Dimensional Probes;

F. Method 2G—Determination of Stack Gas Velocity and Volumetric Flow Rate With Two-Dimensional Probes; or

G. Method 2H—Determination of Stack Gas Velocity Taking Into Account Velocity Decay Near the Stack Wall;

4. To analyze the exhaust gases, use *[the method in 10 CSR 10-6.030(3)] Method 3 as specified by 40 CFR 60, Appendix A in 10 CSR 10-6.030(22)*;

5. To measure the moisture in the stack gas, use *[the method in 10 CSR 10-6.030(4)] Method 4 as specified by 40 CFR 60, Appendix A in 10 CSR 10-6.030(22)*; and

6. To determine capture efficiency, use the procedure in *[10 CSR 10-6.030(20)] 10 CSR 10-6.030(20)*.

(B) Test Methods for Determining Coating Properties. The coating properties in paragraphs (5)(B)1. through (5)(B)6. of this rule shall be determined from the coating manufacturer's supplied data or the *[method referenced in 10 CSR 10-6.030(14)(C)] Method 24*

as specified by 40 CFR 60, Appendix A in 10 CSR 10-6.030(22). If there is a discrepancy between the manufacturer's supplied data and the *[method referenced in 10 CSR 10-6.030(14)(C)] Method 24*, compliance shall be based on *[the method referenced in 10 CSR 10-6.030(14)(C)] Method 24*.

1. Density of coating, D_C .

A. Electrodeposition primer. For electrodeposition primer, the coating density *[shall be]* is as-received.

B. All other coatings. For all other coatings, the coating density *[shall be]* is as-applied.

2. Volume fraction of solids in the coating, V_S .

A. Electrodeposition primer. For electrodeposition primer, the volume fraction of solids in the coating *[shall be]* is as-received.

B. All other coatings. For all other coatings, the volume fraction of solids in the coating *[shall be]* is as-applied.

3. Weight fraction of exempt compounds in the coating, W_E .

4. Weight fraction of regulated VOC in the coating, W_O . This value does not include the weight fraction of water or exempt compounds.

A. Electrodeposition primer. For electrodeposition primer, the weight fraction of VOC in the coating *[shall be]* is as-received.

B. All other coatings. For all other coatings, the weight fraction of VOC in the coating *[shall be]* is as-applied.

5. Weight fraction of solids in the coating, W_S .

6. Weight fraction of water in the coating, W_W .

(C) Other Test Methods and Calculations.

1. Calculating the VOC content of the coating.

A. The VOC content of the coating as-applied, expressed as pounds of VOC per gallon of coating (minus water and exempt compounds), shall be determined using Equation (1) as follows:

$$B = \frac{D_C \times W_O}{1 - \left(\frac{D_C \times W_W}{8.33} \right) - \left(\sum_{j=1}^m \frac{D_C \times W_{Ej}}{D_{Ej}} \right)} \quad (1)$$

Where:

B = VOC content of the coating as-applied, expressed as pounds of VOC per gallon of coating (minus water and exempt compounds);

D_C = density of coating as-applied, expressed as pounds per gallon;

W_O = weight fraction of regulated VOC in the coating, as-applied. This value does not include the weight fraction of water or exempt compounds;

W_W = weight fraction of water in the coating, as-applied;

W_E = weight fraction of exempt compounds in the coating, as-applied;

D_E = density of each exempt compound, expressed as pounds per gallon;

m = number of exempt compounds in the coating; and

8.33 = density of water, expressed as pounds per gallon.

B. The VOC content of the coating as-applied, expressed as pounds of VOC per gallon of coating solids, shall be determined using Equation (2) as follows:

$$B_S = \frac{D_C \times W_O}{V_S} \quad (2)$$

Where:

B_S = VOC content of the coating as-applied, expressed as pounds of VOC per gallon of coating solids;

D_C = density of coating as-applied, expressed as pounds per gallon;

W_O = weight fraction of regulated VOC in the coating, as applied. This value does not include the weight fraction of water or exempt compounds; and

V_S = volume fraction of solids in the coating, as-applied.

C. The VOC content of the coating as-applied, expressed as pounds of VOC per pound of coating solids, shall be determined

using Equation (3) as follows:

$$B_{MWS} = \frac{D_C \times W_O}{D_C \times W_S} \quad (3)$$

Where:

B_{MWS} = VOC content of the coating as-applied, expressed as pounds of VOC per pound of coating solids;

D_C = density of coating as-applied, expressed as pounds per gallon;
 W_O = weight fraction of regulated VOC in the coating, as applied. This value does not include the weight fraction of water or exempt compounds; and

W_S = weight fraction of solids in the coating, as-applied.

2. Equivalent emission limits. Emission limits expressed as pounds of VOC per gallon of coating (minus water and exempt compounds) shall be converted to an equivalent emission limit expressed as pounds of VOC per gallon of coating solids using Equation (4) as follows:

$$L_S = \frac{L}{\left(1 - \frac{L}{7.36}\right)} \quad (4)$$

Where:

L_S = emission limit expressed as pounds of VOC per gallon of coating solids;

L = emission limit expressed as pounds of VOC per gallon of coating (minus water and exempt compounds); and

7.36 = average density of solvents, in pounds per gallon, used to originally establish the emission limits.

3. Weighted averaging.

A. The daily volume-weighted average VOC content of all coatings used in a surface coating unit, expressed as pounds of VOC per gallon of coating (minus water and exempt compounds), shall be calculated using Equation (5) as follows:

$$DAVG_{VW} = \frac{\sum_{i=1}^n (A_i \times B_i)}{C} \quad (5)$$

Where:

$DAVG_{VW}$ = daily volume-weighted average VOC content, expressed as pounds of VOC per gallon of coating (minus water and exempt compounds);

A = daily gallons of each coating used (minus water and exempt compounds) in a surface coating unit;

B = VOC content of the coating as-applied, expressed as pounds of VOC per gallon of coating (minus water and exempt compounds). This is determined by subparagraph (5)(C)1.A. of this rule;

C = total daily gallons of coatings used (minus water and exempt compounds) in a surface coating unit; and

n = number of coatings used in a surface coating unit.

B. The daily volume-weighted average VOC content of all coatings used in a surface coating unit, expressed as pounds of VOC per gallon of coating solids, shall be calculated using Equation (6) as follows:

$$DAVG_{VWS} = \frac{\sum_{i=1}^n (A_{S_i} \times B_{S_i})}{C_S} \quad (6)$$

Where:

$DAVG_{VWS}$ = daily volume-weighted average VOC content, expressed as pounds of VOC per gallon of coating solids;

A_S = daily gallons of coating solids for each coating used in a sur-

face coating unit;

B_S = VOC content of the coating as-applied, expressed as pounds of VOC per gallon of coating solids. This is determined by subparagraph (5)(C)1.B. of this rule;

C_S = total daily gallons of coatings solids used in a surface coating unit; and

n = number of coatings used in a surface coating unit.

C. The daily mass-weighted average VOC content of all coatings used in a surface coating unit, expressed as pounds of VOC per pound of coating solids, shall be calculated using Equation (7) as follows:

$$DAVG_{MWS} = \frac{\sum_{i=1}^n (A_{MWS_i} \times B_{MWS_i})}{C_{MWS}} \quad (7)$$

Where:

$DAVG_{MWS}$ = daily mass-weighted average VOC content, expressed as pounds of VOC per pound of coating solids;

A_{MWS} = daily pounds of coating solids for each coating used in a surface coating unit;

B_{MWS} = VOC content of the coating as-applied, expressed as pounds of VOC per pound of coating solids. This is determined by subparagraph (5)(C)1.C. of this rule;

C_{MWS} = total daily pounds of coatings solids used in a surface coating unit; and

n = number of coatings used in a surface coating unit.

D. The monthly volume-weighted average VOC emission rate of an electrodeposition primer, expressed as pounds of VOC per gallon of coating solids deposited, shall be determined using Equation (8) as follows:

$$MAVG_{VWS} = \left[\frac{\sum_{i=1}^n L_{C_i} D_{C_i} W_{O_i} + \sum_{j=1}^m L_{D_j} D_{D_j}}{\sum_{i=1}^n L_{C_i} V_{S_i}} \right] \times [1 - E/100] \quad (8)$$

Where:

$MAVG_{VWS}$ = monthly volume-weighted average VOC emission rate of the electrodeposition primer, expressed as pounds of VOC per gallon of coating solids deposited;

L_C = monthly volume of each coating consumed, as-received, expressed as gallons;

D_C = density of each coating as-received, expressed as pounds per gallon;

W_O = weight fraction of VOC in each coating, as received;

L_D = monthly volume of each type of VOC dilution solvent added to the coating, expressed as gallons;

D_D = density of each type of VOC dilution solvent added to the coating, expressed as pounds per gallon;

V_S = volume fraction of solids in each coating as received, expressed as gallons of solids per gallon of coating;

E = overall control system efficiency;

n = number of coatings used; and

m = number of VOC dilution solvents used.

E. The monthly volume-weighted average VOC content of all coatings used in a surface coating unit, expressed as pounds of VOC per gallon of coating (minus water and exempt compounds), shall be calculated using Equation (9) as follows:

$$MAVG_{VW} = \frac{\sum_{i=1}^n (A_i \times B_i)}{C} \quad (9)$$

Where:

MAVG_{VW} = monthly volume-weighted average VOC content as-applied, expressed as pounds of VOC per gallon of coating (minus water and exempt compounds);

A = monthly gallons of each coating used (minus water and exempt compounds) in a surface coating unit;

B = VOC content of the coating as-applied, expressed as pounds of VOC per gallon of coating (minus water and exempt compounds), as delivered to the coating applicator. This is determined by subparagraph (5)(C)1.A. of this rule;

C = total monthly gallons of coatings used (minus water and exempt compounds) in a surface coating unit; and

n = number of coatings used in a surface coating unit.

4. The required control system efficiency shall be determined using Equation (10) as follows:

$$R = \left[\frac{(DAVG_{VWS} - L_S)}{DAVG_{VWS}} \right] \times 100 \quad (10)$$

Where:

R = required control system efficiency;

DAVG_{VWS} = daily volume-weighted average VOC content of all coatings used in a surface coating unit, expressed as pounds of VOC per gallon of coating solids, per subparagraph (5)(C)3.B. of this rule; and

L_S = emission limits expressed as pounds of VOC per gallon of coating solids, per subparagraph (5)(C)2. of this rule.

AUTHORITY: section 643.050, RSMo [Supp. 2010] 2016. Original rule filed Dec. 15, 1978, effective July 12, 1979. For intervening history, please consult the *Code of State Regulations*. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed amendment will begin at 9:00 a.m., September 27, 2018. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded any interested person. Interested persons, whether or not heard, may submit a statement of their views until 5:00 p.m., October 4, 2018. Send online comments via the proposed rules web page www.dnr.mo.gov/proposed-rules, email comments to apcprulespn@dnr.mo.gov, or written comments to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 6—Air Quality Standards, Definitions, Sampling
and Reference Methods and Air Pollution Control
Regulations for the Entire State of Missouri

PROPOSED AMENDMENT

10 CSR 10-6.045 Open Burning Requirements. The commission proposes to amend the purpose and sections (1) through (5). If the commission adopts this rule action, the department intends to submit this rule amendment to the U.S. Environmental Protection Agency to

replace the current rule that is in the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Proposed Rules website www.dnr.mo.gov/proposed-rules.

PURPOSE: This amendment clarifies the conditions and restrictions related to open burning. Facilities and operations that under the current rule are required to obtain an open burning permit may now open burn as long as they comply with the conditions and restrictions outlined in the rule. This amendment also adds back definitions specific to this rule. The evidence supporting the need for this proposed rulemaking, per 536.016, RSMo, is Executive Order 17-03 Red Tape Reduction Review and related comments.

PURPOSE: This rule sets forth the conditions and restrictions for the open burning of refuse and combustible materials throughout Missouri [and defines when an open burning permit is required]. The evidence supporting the need for this proposed rulemaking, per section 536.016, RSMo, are the various citizen petitions concerning open burning received in 2005 and meeting minutes for 2005/2006 open burning workgroup meetings.

(1) Applicability. This rule applies to all open burning throughout the state of Missouri [with additional conditions applicable to the metropolitan areas of Kansas City, Springfield, St. Joseph and St. Louis as found in section (3) of this rule].

(2) Definitions.

(A) [Untreated wood—Lumber and other wooden materials that have not been chemically treated for resistance to moisture, fire, fungi, insects, and other pests, or has not otherwise been treated or manufactured with chemicals, or that does not contain adhesives or resins. Untreated wood does not include plywood, particleboard, chipboard, and wood with other than insignificant quantities of paint, coating or finish.] Air curtain incinerator—A device that operates by forcefully projecting a curtain of air across an open chamber or pit in which combustion occurs.

(B) Household waste—Garbage, trash, and other discarded materials that are generated from residential activities in a household.

(C) Open burning—The burning of materials where the products of combustion are emitted into the open air without passing through a chimney or stack.

(D) Salvage Operation—Any business, trade, industry, or other activity conducted in whole or in part for the purpose of salvaging or reclaiming any product or material.

(E) Trade waste—Waste materials from any business, institution, or industry.

(F) Untreated wood—Wood that has not been chemically preserved, painted, stained, or composited. Untreated wood does not include plywood, particleboard, chipboard, and wood with other than minimal quantities of paint, coating, or finish.

(G) Vegetative waste—Tree trunks, tree limbs, tree trimmings, vegetation, and yard waste.

(H) Wood processing facility—A facility that uses logs or dimensional lumber to be cut and used in the manufacturing process.

[(B)](I) Definitions of certain terms specified in this rule, other than those defined in this rule section, may be found in 10 CSR 10-6.020.

(3) General Provisions. [No person may conduct, cause, permit, or allow the disposal of tires, petroleum-based products,

trade waste, construction or demolition waste, salvage operation waste, or asbestos containing materials by open burning, except as permitted below. Nothing in this rule may be construed as to allow open burning which causes or constitutes a public health hazard, nuisance, a hazard to vehicular or air traffic, nor which violates any other rule or statute.] **Open burning that causes or constitutes a public health hazard, a hazard to vehicular or air traffic, is composed of material listed in subsection (3)(A) of this rule, or violates any other rule or statute, is not allowed unless specified otherwise. The staff director reserves the right to prohibit or restrict open burning where burning is considered detrimental to air quality standards.**

[(A) The following types of open burning are allowed by the department when not prohibited by other laws, regulations, or ordinances:

1. Recreational and ceremonial fires. These fires shall be comprised of vegetative woody materials or untreated wood products only;

2. Noncommercial preparation of food, such as by barbecuing;

3. Burning of household or domestic refuse. Burning of household or domestic refuse is limited to open burning on a residential premises having not more than four (4) dwelling units, provided that the refuse originates on the same premises, with the following exceptions:

A. Kansas City metropolitan area. The open burning of household refuse must take place in an area zoned for agricultural purposes and outside that portion of the metropolitan area surrounded by the corporate limits of Kansas City and every contiguous municipality;

B. Springfield-Greene County area. The open burning of household refuse must take place outside the corporate limits of Springfield and only within areas zoned A-1, Agricultural District;

C. St. Joseph area. The open burning of household refuse must take place within an area zoned for agricultural purposes and outside that portion of the metropolitan area surrounded by the corporate limits of St. Joseph; and

D. St. Louis metropolitan area. The open burning of household refuse is prohibited;

4. Land clearing of vegetative debris, provided all burning occurs—

A. Outside of any incorporated area or municipality and outside of the Kansas City metropolitan area, Springfield-Greene County area, and the St. Louis metropolitan area;

B. At least two hundred (200) yards from the nearest occupied structure; and

C. Land clearing of vegetative debris that does not meet the conditions of subparagraphs (3)(A)4.A. and (3)(A)4.B. of this rule may be open burned provided an open burning permit is obtained as found in subsection (3)(B) of this rule;

5. Yard waste, with the following exceptions:

A. Kansas City metropolitan area. The open burning of trees, tree leaves, brush, or any other type of vegetation shall require an open burning permit;

B. Springfield-Greene County area. The City of Springfield requires an open burning permit for the open burning of trees, brush, or any other type of vegetation. The City of Springfield prohibits the open burning of tree leaves;

C. St. Joseph area. Within the corporate limits of St. Joseph, the open burning of trees, tree leaves, brush, or any other type of vegetation grown on a residential property is allowed during the following calendar periods and time-of-day restrictions:

(I) A three (3)-week period within the period commencing the first day of March through April 30 and continuing

for twenty-one (21) consecutive calendar days;

(II) A three (3)-week period within the period commencing the first day of October through November 30 and continuing for twenty-one (21) consecutive calendar days;

(III) The burning shall take place only between the daytime hours of 10:00 a.m. and 3:30 p.m.; and

(IV) In each instance, the twenty-one (21)-day burning period shall be determined by the director of Public Health and Welfare of the City of St. Joseph for the region in which the City of St. Joseph is located provided, however, the burning period first shall receive the approval of the department director; and

D. St. Louis metropolitan area. The open burning of trees, tree leaves, brush, or any other type of vegetation is limited to the period beginning September 16 and ending April 14 of each calendar year and limited to a total base area not to exceed sixteen (16) square feet. Any open burning shall be conducted only between the hours of 10:00 a.m. and 4:00 p.m. and is limited to areas outside of incorporated municipalities;

6. Untreated wood waste materials. Untreated wood waste materials resulting from wood processing facilities in existence as of March 25, 1976, which produce less than eight thousand (8,000) board feet or equivalent per day may be open burned if at least two hundred (200) yards from the nearest occupied structure. Untreated wood waste materials resulting from wood processing plants which relocate or from new wood processing facilities which produce less than eight thousand (8,000) board feet, or equivalent per day, may be open burned if at least one (1) mile outside the city limits of any incorporated area or municipality and at least two hundred (200) yards from the nearest occupied structure;

7. Fire training exercises. Fires set for the purposes of training fire fighters and industrial employees in fire fighting methods provided that—

A. The training is conducted in accordance with National Fire Protection Association standards, NFPA 1403, Standard on Live Fire Training Evolutions (2002 Edition), for fire fighters and NFPA 600, Standard on Industrial Fire Brigades (2005 Edition), for industrial employees. The provisions of NFPA 1403 and 600 shall apply and are hereby incorporated by reference in this rule, as published by the National Fire Protection Association, 11 Tracy Drive, Avon, MA 02322. This rule does not incorporate any subsequent amendments or additions. These exercises include, but are not limited to, liquefied gas propane fueled simulators, flashover simulators, and stationary live burn towers; and

B. Acquired structures to be used for training exercises are subject to the requirements of 10 CSR 10-6.080, subsection (3)(M), National Emission Standard for Asbestos. These requirements include, but are not limited to, inspection of and notification to the director. All petroleum-based products are to be removed from any acquired structure that is to be burned as part of a training exercise;

8. Agricultural burning. Fires set in connection with agricultural or forestry operations related to the growing or harvesting of crops with the following exception. In the St. Louis metropolitan area, if open burning for pest or weed control or crop production on existing cropland between April 15 and September 15, the person must notify the director in writing at least forty-eight (48) hours prior to commencement of burning. The department reserves the right to delay the burning on days when the ambient ozone level is forecasted to be high;

9. Natural resource and land management. Prescribed fires set for natural resource management purposes; and

10. The open burning of certain trade wastes may be

permitted only when it can be shown that a situation exists where open burning is in the best interest of the general public, or when it can be shown that open burning is the safest and most feasible method of disposal. Economic considerations shall not be the primary determinant of feasibility. Any person intending to engage in open burning shall file an application with and receive written approval from the staff director. The application shall contain evidence that the proposed open burning has been approved by the fire control authority which has jurisdiction.

(B) The following types of materials may be open burned provided an open burning permit is obtained from the director. The permit will specify the conditions and provisions of all open burning. The permit may be revoked if the owner or operator fails to comply with the conditions or any provisions of the permit—

1. Burning of untreated wood waste; and

2. Burning of tree trunks, tree limbs, and vegetation at commercial land clearing operations that occur within an incorporated area or municipality or where the proposed open burning will occur within two hundred (200) yards of an occupied structure or when the open burning is located anywhere in the Kansas City metropolitan area, Springfield-Greene County area, or the St. Louis metropolitan area.

(C) Commercial tree trimming operations and municipal utility tree trimming operations shall submit a written request to the director for an annually renewable open burning permit. The permit will specify the conditions and provisions of all open burning. The permit may be revoked if the owner or operator fails to comply with the conditions or any provisions of the permit.

(D) Facility owners or operators may be issued an annually renewable open burning permit for open burning provided that an air curtain destructor or incinerator is utilized and only tree trunks, tree limbs, vegetation, or untreated wood waste are burned. Open burning shall occur at least two hundred (200) yards from the nearest occupied structure unless the owner or operator of the occupied structure provides a written waiver of this requirement. Any waiver shall accompany the open burning permit application. The permit may be revoked if the owner or operator fails to comply with the provisions or any condition of the permit.

(E) In a nonattainment area, as defined in 10 CSR 10-6.020, paragraph (2)(N)5., the staff director reserves the right to deny, revoke, or suspend a permit under this section when conditions exist where burning would be considered detrimental to air quality standards.]

(A) The following materials must not be disposed of by open burning:

- 1. Petroleum-based materials, including but not limited to, tires, asphalt roofing material, carpet, and used oils;**
- 2. Asbestos containing materials;**
- 3. Trade waste, except untreated wood;**
- 4. Construction or demolition waste, except untreated wood;**
- 5. Salvage operation waste;**
- 6. Household waste on or from properties with five (5) or more residential units, such as mobile home parks or multi-family dwellings;**
- 7. Household waste originated from another's property; or**
- 8. Durable goods.**

(B) The open burning of vegetative waste for the following activities must comply with the conditions in subsection (3)(E) of this rule:

1. Commercial land clearing operations when the burning is located inside the city limits or less than two hundred (200) yards from the nearest occupied structure; and

2. Commercial and noncommercial collection operations where vegetative waste originates off-site. Collection operations

that burn more than eighty (80) cubic yards of vegetative waste per week must use an Air Curtain Incinerator and—

A. Meet the conditions of subsections (3)(F) and (3)(G) of this rule;

B. Submit a construction notification, record opacity test results, and make records available for review as outlined in section (4) of this rule; and

C. Measure visible emissions as outlined in section (5) of this rule.

(C) Wood processing facilities producing more than eight thousand (8,000) board feet per day or that are located less than one (1) mile outside the city limits of an incorporated area that open burn untreated wood waste must comply with the conditions in subsection (3)(E) of this rule. Wood processing facilities producing more than eight thousand (8,000) board feet per day that wish to burn more than eighty (80) cubic yards of untreated wood waste per week must use an Air Curtain Incinerator and—

1. Meet the conditions of subsections (3)(F) and (3)(G) of this rule;

2. Submit a construction notification, record opacity test results, and make records available for review as outlined in section (4) of this rule; and

3. Measure visible emissions as outlined in section (5) of this rule.

(D) The open burning of untreated wood waste generated from trade waste or construction and demolition waste must comply with the conditions in subsection (3)(E) of this rule. Any person who burns more than eighty (80) cubic yards of this untreated wood waste per week at a single location must use an Air Curtain Incinerator and—

1. Meet the conditions of subsections (3)(F) and (3)(G) of this rule;

2. Submit a construction notification, record opacity test results, and make records available for review as outlined in section (4) of this rule; and

3. Measure visible emissions as outlined in section (5) of this rule.

(E) Conditions for open burning of vegetative waste or untreated wood from activities described in subsections (3)(B), (3)(C), and (3)(D) of this rule:

1. Burning is to take place only between sunrise and sunset;

2. Burning is to occur at least two hundred (200) yards from the nearest structure not owned by the party conducting the burning, unless an Air Curtain Incinerator is used and—

A. Waivers are obtained from the owner or occupant of the structure; or

B. The local fire department provides approval in those circumstances where the distance cannot be maintained;

3. Burning is to be supervised at all times;

4. The local fire control or other authority with jurisdiction shall be notified of the burning activities prior to initiation;

5. An Air Curtain Incinerator shall be utilized in an ozone non-attainment area from April 15 to September 15; and

6. Burning is not allowed during an ozone alert day in an ozone non-attainment area or ozone maintenance area.

(F) Air curtain incinerator operation.

1. An air curtain incinerator operates by forcefully projecting a curtain of air across an open chamber or open pit in which combustion occurs. Incinerators of this type can be constructed above or below ground and with or without refractory walls and floor. (Air curtain incinerators are not to be confused with conventional combustion devices with enclosed fireboxes and controlled air technology such as mass burn, modular, and fluidized bed combustors.)

2. Owners and operators may only burn the following in their Air Curtain Incinerator:

A. One hundred percent (100%) wood waste;

B. One hundred percent (100%) percent clean lumber;

and

C. One hundred percent (100%) percent mixture of only wood waste, clean lumber, and/or yard waste.

3. Air curtain incinerator operation must take place at least fifty (50) yards from the nearest occupied structure not owned by the party that owns or operates the air curtain incinerator.

(G) Air curtain incinerators must meet the following emission limitations:

1. Maintain opacity to less than or equal to ten percent (10%) opacity, except during the startup period that is within the first thirty (30) minutes of operation;

2. Maintain opacity to less than or equal to thirty-five percent (35%) opacity during the startup period that is within the first thirty (30) minutes of operation; and

3. The opacity testing must consist of a minimum of one hour of opacity values, consisting of ten (10) six- (6-) minute average opacity values.

(H) The open burning of certain trade wastes, such as explosive or hazardous material, is allowed only when it can be shown that a situation exists where open burning is in the best interest of the general public, or when it can be shown that open burning is the safest and most feasible method of disposal. Economic considerations are not to be the primary determinant of feasibility. Any person intending to engage in open burning of these trade wastes is to contact the Department of Natural Resources and receive written approval from the staff director. The person submitting the information is to verify that the proposed open burning has been approved by the fire control authority which has jurisdiction.

(4) Reporting and Record Keeping. *[New Source Performance Standard (NSPS) 40 CFR part 60 Subpart CCCC establishes certain requirements for air curtain destructors or incinerators that burn wood trade waste. These requirements are established in 40 CFR 60.2245–60.2260. The provisions of 40 CFR part 60 Subpart CCCC promulgated as of September 22, 2005 shall apply and are hereby incorporated by reference in this rule, as published by the U.S. Government Printing Office, 732 N Capitol Street NW, Washington, DC 20401. This rule does not incorporate any subsequent amendments or additions. To comply with NSPS 40 CFR 60.2245–60.2260, sources must conduct an annual Method 9 test. A copy of the annual Method 9 test results shall be submitted to the director.]* Owners and operators of Air Curtain Incinerators must—

(A) Prior to commencing construction of a stationary air curtain incinerator, submit a notification to the staff director with the following information:

1. Notification of the intent to construct and operate an air curtain incinerator;

2. The planned initial startup date; and

3. Types of materials that will be burned in the air curtain incinerator;

(B) Keep the notification required in subsection (4)(A) of this rule, and records of results of all initial and annual opacity tests required in section (5) of this rule onsite in either paper copy or electronic format, unless the staff director approves another format, for at least five (5) years;

(C) Make all records available for submittal to the staff director or for an inspector's onsite review; and

(D) Submit the results of the initial opacity test required in section (5) of this rule no later than sixty (60) days following the initial test. Owners and operators must submit the results of the annual opacity test required in section (5) of this rule within sixty (60) days of conducting the test. The opacity testing must consist of a minimum of one (1) hour of opacity values, consisting of ten (10) six- (6-) minute average opacity values. Paper and electronic submittals are acceptable.

(5) Test Methods. *[The visible emissions from air pollution sources shall be evaluated as specified by 40 CFR part 60, Appendix A—Test Methods, Method 9—Visual Determination of the Opacity of Emissions from Stationary Sources. The provisions of 40 CFR part 60, Appendix A, Method 9 promulgated as of December 23, 1971 is incorporated by reference in this rule, as published by the U.S. Government Printing Office, 732 N Capitol Street NW, Washington, DC 20401. This rule does not incorporate any subsequent amendments or additions.]* Visible emissions from Air Curtain Incinerators shall be evaluated within sixty (60) days of the initial startup date and annually thereafter using Method 9 of Appendix A-4 to 40 CFR 60 as specified in 10 CSR 10-6.030(22).

AUTHORITY: section 643.050, RSMo [2000] 2016. Original rule filed June 7, 2007, effective Jan. 30, 2008. Amended: Filed Dec. 29, 2008, effective Sept. 30, 2009. Amended: Filed June 21, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed amendment will begin at 9:00 a.m., September 27, 2018. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded any interested person. Interested persons, whether or not heard, may submit a statement of their views until 5:00 p.m., October 4, 2018. Send online comments via the proposed rules web page www.dnr.mo.gov/proposed-rules, email comments to apcprulespn@dnr.mo.gov, or written comments to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176.

Title 10—DEPARTMENT OF NATURAL RESOURCES

Division 10—Air Conservation Commission

Chapter 6—Air Quality Standards, Definitions, Sampling and Reference Methods and Air Pollution Control

Regulations for the Entire State of Missouri

PROPOSED AMENDMENT

10 CSR 10-6.060 Construction Permits Required. The commission proposes to amend sections (1) through (12). If the commission adopts this rule action, the department intends to submit this rule amendment to the U.S. Environmental Protection Agency to replace the current rule that is in the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Proposed Rules website www.dnr.mo.gov/proposed-rules.

PURPOSE: This rule amendment makes significant changes to the entire construction permit rule to clarify requirements and procedures improving user friendliness and regulatory certainty. The rule-making also adds a voluntary permit option and a general permit option, updates incorporations by reference, removes unnecessary uses of restrictive words in compliance with the Executive Order 17-03, and removes a significant amount of duplicative language. The

evidence supporting the need for this proposed rulemaking, per 536.016, RSMo, is Executive Order 17-03 Red Tape Reduction Review and related comments.

PURPOSE: This rule defines sources [which are] required to obtain permits to construct. It establishes: requirements to be met prior to construction or modification of any [of these] sources[.]; a procedure for a source to voluntarily obtain a permit for implementing practically enforceable conditions; a procedure for the permitting authority to issue general permits; [This rule also establishes] permit fees; and public notice requirements for certain [sources and incorporates a means for unifying the processing of construction and operating permit issuance] permits.

(1) Applicability.

(A) Definitions. Definitions of certain terms used in this rule may be found in paragraph (b) of 40 CFR 52.21 which is incorporated by reference in subsection (8)(A) of this rule, except that—

1. Any provisions of 40 CFR 52.21(b) that are stayed shall not apply;

2. Solely for the purposes of paragraph (1)(A)2. and section (7) of this rule, the following definitions shall be used in place of the definitions of the same terms specified elsewhere in this subsection:

A. Major stationary source is defined in 40 CFR 51.165(a)(1)(iv), promulgated as of July 1, 2011, and hereby incorporated by reference in this rule, as published by the Office of the Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, DC 20408. This rule does not incorporate any subsequent amendments or additions. The term major, as used in this definition, shall be major for the nonattainment pollutant;

B. Major modification is defined in 40 CFR 51.165(a)(1)(v), promulgated as of July 1, 2011, and hereby incorporated by reference in this rule, as published by the Office of the Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, DC 20408, except that any incorporated provisions that are stayed shall not apply. This rule does not incorporate any subsequent amendments or additions. The term major, as used in this definition, shall be major for the nonattainment pollutant;

C. Net emissions increase is defined in 40 CFR 51.165(a)(1)(vi), promulgated as of July 1, 2011, and hereby incorporated by reference in this rule, as published by the Office of the Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, DC 20408, except that the term paragraph (a)(1)(xii)(B) shall be 40 CFR 52.21(b)(21)(ii). This rule does not incorporate any subsequent amendments or additions; and

D. Significant is defined in 40 CFR 51.165(a)(1)(x), promulgated as of July 1, 2011, and hereby incorporated by reference in this rule, as published by the Office of the Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, DC 20408. This rule does not incorporate any subsequent amendments or additions;

3. Solely for the purposes of section (9) of this rule, the following definitions shall be used in addition to definitions specified elsewhere in this subsection:

A. Construct a major source—

(I) Fabricate, erect, or install, at any greenfield site, a stationary source or group of stationary sources which is located within a contiguous area and under common control and which emits or has the potential to emit ten (10) tons per year of any hazardous air pollutant (HAP) or twenty-five (25) tons per year of any combination of HAPs; or

(II) Fabricate, erect, or install, at any developed site, a new process or production unit which in and of itself emits or has the potential to emit ten (10) tons per year of any HAP or twenty-five (25) tons per year of any combination of HAPs;

B. Greenfield site—A contiguous area under common control that is an undeveloped site;

C. Process or production—Any collection of structures and/or equipment, that processes, assembles, applies, or otherwise uses material inputs to produce or store an intermediate or final product. A single facility may contain more than one (1) process or production unit;

D. Reconstruct a major source—Replace components at an existing process or production unit where the replacement of components in and of itself emits or has the potential to emit ten (10) tons per year of any HAP or twenty-five (25) tons per year of any combination of HAPs, whenever—

(I) The fixed capital cost of the new components exceeds fifty percent (50%) of the fixed capital cost that would be required to construct a comparable process or production unit; and

(II) It is technically and economically feasible for the reconstructed major source to meet the applicable maximum achievable control technology emission limitation for new sources established under this section;

E. Research and development activities—Activities conducted at a research or laboratory facility whose primary purpose is to conduct research and development into new processes and products, where such source is operated under the close supervision of technically-trained personnel and is not engaged in the manufacture of products for sale or exchange for commercial profit, except in a de minimis manner;

F. Similar source—A stationary source or process that has comparable emissions and is structurally similar in design and capacity to a constructed or reconstructed major source such that the source could be controlled using the same control technology; and

G. Definitions for certain terms, other than those defined in subparagraphs (1)(A)3.A. through F. of this rule, may be found in 40 CFR 63.41, promulgated as of July 1, 2011, and hereby incorporated by reference in this rule, as published by the Office of the Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, DC 20408. This rule does not incorporate any subsequent amendments or additions;

4. Nonattainment pollutant—Each and every pollutant for which the location of the source is in an area designated to be in nonattainment of a National Ambient Air Quality Standard (NAAQS) under section 107(d)(1)(A)(i) of the Act. Any constituent or precursor of a nonattainment pollutant shall be a nonattainment pollutant, provided that the constituent or precursor pollutant may only be regulated under this rule as part of regulation of the corresponding NAAQS pollutant. Both volatile organic compounds (VOC) and nitrogen oxides (NO_x) shall be nonattainment pollutants for a source located in an area designated nonattainment for ozone;

5. The provisions of subsection (8)(B) of this rule regarding the term administrator shall apply; and

6. Definitions for certain terms used in this rule, other than those defined elsewhere in this subsection, may be found in 10 CSR 10-6.020.

(B) Covered Installations/Changes. This rule shall apply to installations throughout Missouri with the potential to emit any pollutant in an amount equal to or greater than the de minimis levels. This rule also shall apply to changes at installations which emit less than the de minimis levels where the

construction or modification itself would be subject to section (6), (7), (8), or (9) of this rule. This rule shall apply to all incinerators, unless permitted under rule 10 CSR 10-6.062.

(C) *Construction/Operation Prohibited.* No owner or operator shall commence construction or modification of any installation subject to this rule, begin operation after that construction or modification, or begin operation of any installation which has been shut down longer than five (5) years without first obtaining a permit from the permitting authority under this rule. For sources not subject to review under sections (7), (8), or (9) of this rule, construction may be commenced if authorized by the director. A request for authorization must include: a signed waiver of any state liability; a complete list of the activities to be undertaken; and, the applicant's full acceptance and knowledge of all liability associated with the possibility of denial of the permit application. A request will not be granted unless an application for permit approval under this rule has been filed. The waiver is not available to sources seeking federally enforceable permit restrictions to avoid review under sections (7)–(9) of this rule.

(D) *Exempt Emissions Units.* This rule does not apply to the construction or modification of installations that are exempted or excluded by 10 CSR 10-6.061 or are permitted under rule 10 CSR 10-6.062.]

(A) *Construction Permit Required.* The owner or operator of a new or existing installation throughout Missouri that meets any of the following provisions must obtain a permit:

1. Has construction of a new installation that results in a potential to emit greater than *de minimis* threshold levels;
2. Has new construction and/or modification that results in a potential to emit greater than *de minimis* threshold levels at an existing installation with potential to emit less than the *de minimis* threshold levels;
3. Has new construction and/or modification that results in an emission increase at an existing installation whose potential to emit exceeds *de minimis* threshold levels or is less than *de minimis* threshold levels due to federally enforceable requirements in a permit;
4. The new construction and/or modification is a major modification; or
5. Has construction of an incinerator.

(B) *Voluntary Permit.* An installation in Missouri may obtain a permit under this rule in order to acquire voluntary, practically enforceable limits.

(C) *Exempt Construction or Modification.* No construction permit is necessary for construction or modification of installations when—

1. The entire construction or modification is exempt or excluded by 10 CSR 10-6.061;
2. Construction or modification is permitted under 10 CSR 10-6.062; or
3. Original construction or modification occurred prior to May 13, 1982. Any construction or modification that occurs after this date is not exempt.

(D) *Construction and Operation Prohibited Prior to Permitting.* Owners or Operators shall obtain a permit from the permitting authority, except as allowed under subsection (1)(D) of this rule, prior to any of the following activities:

1. The start of actual construction or modification of any installation subject to this rule;
2. Operation after construction or modification; or
3. Operation of any emission unit that has been permanently shutdown.

(E) *Construction Allowed Prior to Permitting.* A Pre-Construction Waiver may be obtained with authorization of the director by sources not subject to review under section (7), (8),

or (9) of this rule, or sources seeking federally enforceable permit restrictions to avoid review under section (7), (8), or (9) of this rule.

1. A complete request for authorization includes:

- A. A signed waiver of any state liability;
- B. A complete list of the activities to be undertaken; and
- C. The applicant's full acceptance and knowledge of all liability associated with the possibility of denial of the permit application.

2. A request will not be granted unless an application for permit approval under this rule has been filed or if the start of actual construction has occurred.

[(2) *Unified Review.* When the construction or modification and operation of any installation requires a construction permit under this rule, and an operating permit or its amendment, under 10 CSR 10-6.065, the installation shall receive a unified construction and operating permit, or its amendment, and a unified review, hearing and approval process, unless the applicant requests in writing that the application for a construction and operating permit, or its amendment, be reviewed separately. Under this unified review process, the applicant shall submit all the applications, forms, and other information required by the permitting authority.

(A) *Review of Applications.* The permitting authority shall complete any unified review within one hundred eighty-four (184) days, as provided under the procedures of this rule and 10 CSR 10-6.065 Operating Permits Required.

(B) *Issuance of Permits.* As soon as the unified review process is completed, if the applicant complies with all applicable requirements under this rule and 10 CSR 10-6.065, the construction permit and the operating permit, or its amendment, shall be issued to the applicant and the applicant may commence construction. The operating permit shall be retained by the permitting authority until validated pursuant to this section.

(C) *Validation of Operating Permits.* Within one hundred and eighty (180) days after commencing operation, the holder of an operating permit, or its amendment, issued by the unified review process shall submit to the permitting authority all information required by the permitting authority to demonstrate compliance with the terms and conditions of the issued operating permit, or its amendment. The permittee shall also provide information identifying any applicable requirements which became applicable subsequent to issuance of the operating permit. Within thirty (30) days after the applicant's request for validation, the permitting authority will take action denying or approving validation of the issued operating permit, or its amendment. If the permittee demonstrates compliance with both the construction and operating permits, or its amendment, the permitting authority shall validate the operating permit, or its amendment, and forward it to the permittee. No part 70 permit will be validated unless—

1. At the time of validation, the permitting authority certifies that the issued permit contains all applicable requirements; or

2. The procedures for permit renewal in 10 CSR 10-6.065(6)(E)3. have occurred prior to validation to insure the inclusion of any new applicable requirements to which the part 70 permit is subject.]

(2) *Definitions.*

(A) *Definitions of general terms used in this rule, other than those defined elsewhere in this section, may be found in 10 CSR 10-6.020.*

(B) *Definitions of certain terms used in this rule may be found in paragraph (b) of 40 CFR 52.21, which is incorporated by reference in subsection (8)(A) of this rule, except that any provisions*

of 40 CFR 52.21(b) that are stayed shall not apply.

(C) Alternate site analysis—An analysis of alternative sites, sizes, production processes, and environmental control techniques for the proposed source that demonstrates that benefits of the proposed installation significantly outweigh the environmental and social costs imposed as a result of its location, construction, or modification.

(D) Ambient air increments—The limited increases of pollutant concentrations in ambient air over the baseline concentration.

(E) Emission(s)—The release or discharge, whether directly or indirectly, into the atmosphere of one (1) or more air contaminants listed in subsection (3)(A) of 10 CSR 10-6.020.

(F) Good engineering practice (GEP) stack height—The greater of—

1. Sixty-five meters (65 m) measured from the ground-level elevation at the base of the stack;

2. For stacks on which construction commenced on or before January 12, 1979, and for which the owner or operator had obtained all applicable permits or approvals required under 40 CFR 51 and 52,

$$Hg = 2.5H$$

provided the owner or operator produces evidence that this equation was actually relied on in establishing an emission limitation; and for all other stacks,

$$Hg = H + 1.5L$$

Where:

Hg = GEP stack height, measured from the ground-level elevation at the base of the stack;

H = height of nearby structure(s) measured from the ground-level elevation at the base of the stack; and

L = lesser dimension, height, or projected width of the nearby structure(s). Provided that the director may require the use of a field study or fluid model to verify GEP stack height for the installation; or

3. The height demonstrated by a fluid model or field study approved by the director, which ensures that the emissions from a stack do not result in excessive concentrations of any air pollutant as a result of atmospheric downwash, wakes, or eddy effects created by the source itself, nearby structures, or nearby terrain features.

(G) Incinerator—Any article, machine, equipment, contrivance, structure, or part of a structure used to burn refuse or to process refuse material by burning other than by open burning.

(H) Modification—Any physical change to, or change in method of operation of, a source operation or attendant air pollution control equipment which would cause an increase in potential emissions of any air pollutant emitted by the source operation.

(I) Nonattainment pollutant—Each and every pollutant for which the location of the source is in an area designated to be in nonattainment of a National Ambient Air Quality Standard (NAAQS) under section 107(d)(1)(A)(i) of the Act. Any constituent or precursor of a nonattainment pollutant shall be a nonattainment pollutant, provided that the constituent or precursor pollutant may only be regulated under this rule as part of regulation of the corresponding NAAQS pollutant. Both volatile organic compounds (VOC) and nitrogen oxides (NO_x) shall be nonattainment pollutants for a source located in an area designated nonattainment for ozone.

(J) Offset—A decrease in actual emissions from a source operation or installation that is greater than the amount of emissions anticipated from a modification or construction of a source operation or installation. The decrease must have substantially simi-

lar environmental and health effects on the impacted area. Any ratio of decrease to increase greater than one-to-one (1:1) constitutes offset. The exceptions to this are ozone nonattainment areas where volatile organic compound and oxides of nitrogen emissions will require an offset ratio of actual emission reduction to new emissions according to the following schedule:

1. marginal area = 1.1:1;
2. moderate area = 1.15:1;
3. serious area = 1.2:1;
4. severe area = 1.3:1; and
5. extreme area = 1.5:1.

(K) Permanently shutdown—The permanent cessation of operation of any air pollution control equipment or process equipment, not to be placed back into service or have a start-up.

(L) Pilot trials—A study, project or experiment conducted in order to evaluate feasibility, time, cost, adverse events, and improve upon the design prior to performance on a larger scale.

(M) Pollutant—An air contaminant listed in subsection (3)(A) of 10 CSR 10-6.020.

(N) Portable equipment—Any equipment that is designed and maintained to be movable, primarily for use in noncontinuous operations. Portable equipment includes rock crushers, asphaltic concrete plants, and concrete batching plants.

(O) Refuse—Garbage, rubbish, trade wastes, leaves, salvageable material, agricultural wastes, or other wastes.

(P) Regulated air pollutant—All air pollutants or precursors for which any standard has been promulgated.

(Q) Risk assessment levels (RALs)—Ambient concentrations of air toxics that are not expected to produce adverse cancer and non-cancer health effects during a defined period of exposure. The RALs are based upon animal toxicity studies, human clinical studies, and human epidemiology studies that account for exposure to sensitive populations such as the elderly, pregnant women, children, and those having respiratory illness such as asthma.

(R) Screening model Action Levels (SMALs)—The emission threshold of an individual hazardous air pollutant (HAP) or HAP group that triggers the need for an air quality analysis of the individual HAP.

(S) Shutdown—The cessation of operation of any air pollution control equipment or process equipment.

(T) Shutdown, permanent—See permanent shutdown.

(U) Start-up—The setting into operation of any air pollution control equipment or process equipment, except the routine phasing in of process equipment.

(V) Temporary installation—An installation that operates or emits pollutants less than two (2) years.

(3) [Temporary Installations and Pilot Plants Permits. The permitting authority may exempt temporary installations and pilot plants having a potential to emit under one hundred (100) tons per year of each pollutant from any of the requirements of this rule, provided that these exemptions are requested in writing prior to the start of construction. These exemptions shall be granted only when the attainment or maintenance of ambient air quality standards is not threatened, when there will be no significant impact on any Class I area, and when the imposition of requirements of this rule would be unreasonable.] Application and Permit Procedures.

(A) Preapplication Meeting.

1. Prior to submittal of a permit application, the applicant may request a preapplication meeting with the permitting authority to discuss the nature of and apparent requirements for the forthcoming permit application.

2. A preapplication meeting is required thirty (30) days prior to application submittal of a section (7), (8) or (9) permit application.

(B) Permitting Authority's Responsibilities Regarding the Permit

Application.

1. The permitting authority provides a standard application package for permit applicants.

2. The permitting authority requires the following information in the standard application package and supplemental material:

A. The applicant's company name and address (or plant name and address if different from the company name), the owner's name and state registered agent, and the telephone number and name of the plant site manager or other contact person;

B. Site information including locational data, equipment layout, and plant layout;

C. A description of the installation's processes and products and the four (4)-digit Standard Industrial Classification Code; and

D. The following emissions-related information:

(I) A description of the new construction or modification occurring at the installation;

(II) Identification and description of all emissions units with emissions that are being added or modified as a result of the construction or modification described in part (3)(B)2.D.(I) of this rule;

(III) A description of all emissions of regulated air pollutants emitted from each emission unit identified in part (3)(B)2.D.(II) of this rule;

(IV) The potential to emit of each pollutant emitted per emission unit including, but not limited to, maximum hourly design rates, emission factors, or other information that enables the permitting authority to verify such rates, and in such terms as necessary to establish compliance with applicable regulations;

(V) Information necessary to determine or regulate emissions including, but not limited to, fuels, fuel use, raw materials, production rates, and operating schedules;

(VI) Identification and description of air pollution capture and control equipment with capture and control efficiencies and the pollutants that are being controlled for each respective capture and control device;

(VII) Identification and description of compliance monitoring devices or activities; and

(VIII) Limitations on installation operations and work practice standards affecting emissions for all regulated air pollutants.

(C) Applicant Responsibilities Regarding the Permit Application.

1. The applicant shall submit the information specified in the application package for each emissions unit being constructed or modified.

2. Certification by a responsible official. Any application form or report submitted pursuant to this rule shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, and any other certification, shall be signed by a responsible official and contain the following language: I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

3. The applicant shall supply the following supplemental information in addition to the application:

A. Additional information, plans, specifications, drawings, evidence, documentation, and monitoring data that the permitting authority may require to verify applicability and complete review under this rule;

B. Other information required by any applicable requirement. Specific information may include, but is not limited to, items such as testing reports, vendor information, material safety data sheets, or information related to stack height limitations developed pursuant to section 123 of the Clean Air Act;

C. Calculations on which the information in parts (3)(B)2.D.(I) through (3)(B)2.D.(VIII) of this rule are based;

D. Related information in sufficient detail necessary to establish compliance with the applicable standard reference test method, if any; and

E. Ambient air quality modeling data, in accordance with section (5) or (8) of this rule, for all pollutants requiring modeling to determine the air quality impact of the construction or modification of the installation.

4. Confidential information. An applicant may submit information to the permitting authority under a claim of confidentiality pursuant to 10 CSR 10-6.210. The confidentiality request needs to be submitted with the initial application to ensure confidentiality.

5. Duty to supplement or correct application. Any applicant that fails to submit any relevant facts or submits incorrect information in a permit application, upon becoming aware of the failure or incorrect submittal, shall promptly submit supplementary facts or corrected information. In addition, an applicant shall provide additional information, as necessary, to address any requirements that become applicable to the installation after the date an application is deemed complete, but prior to the issuance of the construction permit.

6. Filing fees in accordance with subparagraph (3)(D)5.I. of this rule.

(D) Completeness Review of Application. Review of applications for completeness includes the following:

1. The permitting authority will review each application for completeness and inform the applicant within thirty (30) days if the application is not complete. In order to be complete, an application must include a completed application package and the information required in subsection (3)(C) of this rule.

2. If the permitting authority does not notify the installation that its application is not complete within thirty (30) days of receipt of the application, the application shall be deemed complete. However, nothing in this subsection prevents the permitting authority from requesting additional information that is necessary to process the application.

3. The permitting authority maintains a checklist to be used for the completeness determination. A notice of incompleteness identifying the application's deficiencies will be provided to the applicant.

(E) Conditions that the permitting authority can require in permit. The permitting authority may impose conditions in a permit necessary to accomplish the purposes of this rule, any applicable requirements, or the Air Conservation Law, Chapter 643, RSMo, and are no less stringent than any applicable requirements. Such conditions may include:

1. Operating or work practice constraints to limit the maximum level of emissions;

2. Emission control device efficiency specifications to limit the maximum level of emissions;

3. Maximum level of emissions;

4. Emission testing after commencing operations, to be conducted by the owner or operator, as necessary to demonstrate compliance with applicable requirements or other permit conditions;

5. Instrumentation to monitor and record emission data;

6. Other sampling and testing facilities;

7. Data reporting;

8. Post-construction ambient monitoring and reporting;

9. Sampling ports of a suitable size, number, and location; and

10. Safe access to each port.

(F) Following review of an application, the permitting authority will issue a draft permit for public comment in accordance with the procedures for public participation as specified in subsection (12)(A), Appendix (A) of this rule for all applications for sources that:

1. Emit five (5) or more tons of lead per year;

2. Contain GEP stack height demonstrations; or
3. Are subject to section (7), (8), or (9) of this rule.

(G) Final permit determination. Final determination will be made on the following schedules.

1. The permitting authority will make a final permit determination for permit applications processed under section (7), (8), or (9) of this rule no later than one hundred eighty-four (184) calendar days after receipt of a complete application, taking into account any additional time necessary for missing information.

2. The permitting authority will make a final permit determination for permit applications processed under section (4), (5), or (10) of this rule no later than ninety (90) calendar days after receipt of a complete application, taking into account any additional time necessary for missing information.

3. If, while processing an application that has been determined or deemed to be complete, the permitting authority determines that additional information is necessary to evaluate or to take final action on that application, the permitting authority may request this additional information in writing. In requesting this information, the permitting authority will establish a deadline for a response. The review period will be extended by the amount of time necessary to collect the required information.

4. Timeframes stated in this paragraph do not apply to permit amendments. Amendments to permits will follow the schedules outlined in section (11) of this rule.

(H) Fees.

1. All installations or source operations requiring permits under this rule must submit the application with a permit filing fee to the permitting authority. Failure to submit the permit filing fee constitutes an incomplete permit application according to paragraph (3)(C)10. of this rule.

2. Upon receipt of an application for a permit or a permit amendment, a permit processing fee begins to accrue per hour of actual staff time. In lieu of the per-hour processing fee for relocation of portable plants subject to paragraph (4)(D)1. of this rule, a flat fee as specified in subparagraph (3)(D)5.I. of this rule must be submitted by the applicant.

3. The permitting authority, upon request, will notify the applicant in writing if the permit processing fee approaches two thousand dollars (\$2,000) and in two-thousand-dollar (\$2,000) increments after that.

4. After making a final determination whether the permit should be approved, approved with conditions, or denied, the permitting authority will notify the applicant in writing of the final determination and the total permit processing fees due. The amount of the fee will be determined in accordance with subparagraph (3)(D)5.I of this rule.

5. The applicant shall submit fees for the processing of the permit application within ninety (90) calendar days of the final review determination, whether the permit is approved, denied, withdrawn, or not needed. After the ninety (90) calendar days, the unpaid processing fees will have interest imposed upon the unpaid amount at the rate of ten percent (10%) per annum from the date of billing until payment is made. Failure to submit the processing fees after the ninety (90) calendar days will result in the permit being denied (revoked for portable installation location amendments) and the rejection of any future permit applications by the same applicant until the processing fee plus interest has been paid.

6. Partially processed permits that are withdrawn after submittal are charged at the same processing fee rate in subparagraph (3)(D)5.I of this rule for the time spent processing the application.

7. The applicant shall pay for any publication of notice required and pay for the original and one (1) copy of the transcript, to be filed with the permitting authority, for any hearing required under this rule. No permit is issued until all publication and transcript costs have been paid.

8. The commission may reduce the permit processing fee or exempt any person from payment of the fee upon an appeal filed with the commission stating and documenting that the fee will create an unreasonable economic hardship upon the person.

9. Permit fees.

Permit Application Type	Rule Section Reference	Filing Fee	Processing Fee
Portable Source Relocation Request	(4)	\$300	----
Minor	(5)	\$250	\$75/hr
General Permit	(6)	\$700	----
NSR	(7)	\$5,000	\$75/hr
PSD	(8)	\$5,000	\$75/hr
HAP	(9)	\$5,000	\$75/hr
Initial PAL	(7) or (8)	\$5,000	\$75/hr
Renewal PAL	(7) or (8)	\$2,500	\$75/hr
Temporary/Pilot	(10)	\$250	\$75/hr
Permit Amendment	(11)	----	\$75/hr

10. No later than three (3) business days after receipt of the whole amount of the fee due, the permitting authority will send the applicant a notice of payment received. The permit will also be issued at this time, provided the final determination was for approval and the permit processing fee was timely received.

(I) Final Permit Issuance: Any installation subject to this rule will be issued a permit and be in effect if all of the following conditions are met:

1. Information is submitted to the permitting authority which is sufficient for the permitting authority to verify the annual emission rate and to verify that no applicable emission control rules will be violated;

2. No applicable requirements of the Air Conservation Law are violated;

3. The installation does not cause an adverse impact on visibility in any Class I area;

4. The installation will not interfere with the attainment or maintenance of NAAQS and the air quality standards established in 10 CSR 10-6.010;

5. The installation will not cause or contribute to ambient air concentrations in excess of any applicable maximum allowable increase listed in paragraph (5)(F)3. Table 1 of this rule, or be over the baseline concentration in any attainment or unclassified area;

6. The installation will not exceed the risk assessment levels required for all pollutants that exceed the screening model action levels; and

7. All permit fees are paid.

(J) After a permit has been granted—

1. The owner or operator subject to the provisions of this rule must furnish the permitting authority written notification of the actual date of initial start-up of a source operation or installation within fifteen (15) days of that date.

2. A permit will become invalid if:

A. Construction or modification work is not commenced within two (2) years for permits issued under section (4), (5), (6) or (10) from the date of issuance;

B. Construction or modification work is not commenced within eighteen (18) months from the date of issuance for permits issued under section (7), (8), or (9); or

C. Work is suspended for more than eighteen (18) months for any type of permit, and if—

(I) The delay was reasonably foreseeable by the owner or operator at the time the permit was issued;

(II) The delay was not due to an act of God or other conditions beyond the control of the owner or operator; or

(III) Failure to consider the permit invalid would be

unfair to other potential applicants;

D. Exception: An installation may request an extension request for starting construction related to a permit. The extension request must be submitted to the permitting authority at a minimum of thirty (30) days prior the date when the permit will become invalid. The request shall include the reason for the extension request and a verification statement that the installation is able to meet all of the requirements included in the permit. The permitting authority reserves the right to deny an extension based on the promulgation of new rules that would affect the permit review or changes in air quality that have occurred since the permit issuance.

3. Any owner or operator who constructs, modifies, or operates an installation not in accordance with the application submitted and the permit issued, including any terms and conditions made a part of the permit is in violation of this rule.

4. Approval to construct does not relieve any owner or operator of the responsibility to comply fully with applicable provisions of the Air Conservation Law and rules or any other requirements under local, state, or federal law.

(4) Portable Equipment Permits, Amendments, and Relocations. *[Portable equipment must meet the following criteria:]*

(A) *[The potential to emit is less than one hundred (100) tons per year of any air pollutant;]* Applicability. This section of the rule applies to construction or modification that is portable and meets the following criteria:

1. The installation consists solely of portable equipment and associated haul roads and storage piles and has a potential to emit less than two hundred fifty (250) tons per year of particulate matter and less than one hundred (100) tons per year of any other air pollutant, taking into account any federally enforceable conditions; and

2. Any equipment operated at a location for less than twenty-four (24) consecutive months without an intervening relocation.

(B) *[The equipment was permitted previously under either section (5), (6), (7), or (8) of this rule and the previous permit is still valid;]* The review and issuance of each initial permit application will follow the procedures of section (3) of this rule and subsection (5)(D) of this rule, Modeling Required.

(C) *[The equipment is operated and maintained in a manner identical to that specified in the currently valid permit; and]* The review of any modifications to the portable plant will follow the amendment procedures outlined in section (11) of this rule.

[(D) The following conditions must be met when permitted portable equipment is to be operated at a different location:]

1. When the owner or operator wishes to operate the portable equipment at a new location not previously permitted or at a location where other sources (either permanent or portable) are operating, the owner or operator shall submit to the permitting authority a Portable Source Relocation Request, property boundary plot plan and the equipment layout for the site. A relocation request is subject to the fees and the time frames specified in this rule as described in subsection (10)(A) of this rule. The relocation request will be approved if it is determined that there will be no significant impact on any Class I area or an area where air quality increments have been consumed. The permitting authority shall make the final determination and, if appropriate, approve the relocation request no later than twenty-one (21) calendar days after receipt of the complete Portable Source Relocation Request;

2. When the owner or operator wishes to relocate the portable equipment to a site that is listed on the permit or on the amended permit (provided other sources are not approved to operate at the same location), the owner or

operator shall report the move to the permitting authority on a Portable Source Relocation Request for authorization to operate in the new locale as soon as possible, but not later than seven (7) calendar days prior to ground breaking or initial equipment erection. No fees are associated with this authorization. Authorization will be presumed if notification of denial is not received by the specified ground breaking or equipment erection date; and

3. The equipment shall be operated at each new location no more than twenty-four (24) consecutive months without an intervening relocation.]

(D) The relocation of a portable plant from a site will follow the procedures outlined below:

1. For permitted portable equipment operating at a different location not previously approved in a permit or an amendment—

A. The owner or operator shall submit to the permitting authority a Portable Source Relocation Request, property boundary plot plan, and the equipment layout for the site.

B. Each relocation request shall be accompanied with the relocation fees as described in subparagraph (3)(D)5.I. of this rule.

C. The permitting authority shall make the final determination and, if appropriate, approve the relocation request no later than twenty-one (21) calendar days after receipt of the complete Portable Source Relocation Request.

2. For permitted portable equipment operating at a location previously approved in a permit or an amendment, and conditions at the site have not changed (new sources approved to operate at the location)—

A. When relocating portable equipment to a site that is listed on the permit or on the amended permit, the owner or operator shall report the move to the permitting authority on a Portable Source Relocation Request for authorization to operate in a new location as soon as possible, but not later than seven (7) calendar days prior to ground breaking or initial equipment erection.

B. No fees are associated with this authorization.

C. Authorization will be presumed if notification of denial is not received by the specified ground breaking or equipment erection date.

(E) The director may require an air quality analysis that is not required under subsection (5)(D) of this rule if it is likely that the emissions of the proposed construction or modification will affect air quality or the air quality standards listed in paragraphs (3)(E)3. through 7. of this rule or complaints filed in the vicinity.

(5) *[De Minimis] Minor Permits.*

(A) *[Any construction or modification at an installation subject to this rule which results in a net emissions increase below the de minimis levels shall be exempt from further requirements of this rule if the owner or operator of the source applies for, and the permitting authority issues, a de minimis permit for that installation.]* Applicability. This section applies to the installations that need a permit under subsection (1)(A), but are not subject to section (4), (6), (7), (8), (9), or (10) of this rule.

[(B) This de minimis permit shall be issued and in effect only if all of the following conditions are met:]

1. The permitting authority is notified in writing of the proposed construction prior to the commencement of construction;

2. Information is submitted to the permitting authority which is sufficient for the permitting authority to verify the annual emission rate, to verify that no applicable emission control rules will be violated, and to verify that the net emission increase of the installation is below the de minimis levels;

3. Net emissions do not increase above the *de minimis* levels at an installation having a *de minimis* permit under this section. If net emissions at the installation do increase above the *de minimis* levels, the installation shall be in violation of this rule until it obtains a permit under the other applicable requirements of this rule; and

4. All permit fees are paid.]

(B) The submittal and review of each permit application and issuance of each permit will follow the procedures of section (3) of this rule and, when applicable, subsection (12)(A), Appendix A of this rule.

(C) In order to eliminate the necessity for a large number of *de minimis* permit applications from a single installation, a special case *de minimis* permit may be developed for those batch-type production processes [which] that frequently change products and component source operations. Operating in violation of the conditions of a special case *de minimis* permit [shall be] is a violation of this rule.

(D) Air Quality Analysis Requirements.

1. An air quality analysis will not be required for applications having a maximum design capacity emission rate of no more than the hourly *de minimis* level unless paragraph (5)(D)2. of this rule applies. For applications having a maximum design capacity emission rate greater than the hourly *de minimis* level, a permit will be issued only if an air quality analysis demonstrates that the proposed construction or modification will not—

A. Interfere with the attainment or maintenance of NAAQS and the air quality standards established in 10 CSR 10-6.010; or

B. Cause or contribute to ambient air concentrations in excess of any applicable maximum allowable increase listed in subsection (11)(A) Table 1, of this rule, over the baseline concentration in any attainment or unclassified area.

2. Exceptions. The director may require an air quality analysis for applications if it is likely that emissions of the proposed construction or modification will—

A. Interfere with the attainment or maintenance of NAAQS and the air quality standards established in 10 CSR 10-6.010;

B. Cause or contribute to ambient air concentrations in excess of any applicable maximum allowable increase listed in subsection (11)(A) Table 1, of this rule, over the baseline concentration in any attainment or unclassified area; or

C. Result in complaints filed in the vicinity of the proposed construction or modification warrant an air quality analysis.]

(D) Modeling Required. Any construction or modification at a covered installation with changes where the allowable emissions increase from the construction or modification is greater than *de minimis* threshold levels or the hazardous air pollutant is greater than the screening model action levels taking into account any federally enforceable conditions shall complete an air quality analysis for the affected pollutant in accordance with subsection (5)(F) of this rule. At minimum, the installation will demonstrate that the proposed construction or modification will not—

1. Interfere with the attainment or maintenance of NAAQS and the air quality standards established in 10 CSR 10-6.010; or

2. Cause or contribute to an exceedance of the risk assessment levels for all pollutants that exceed the screening model action levels.

(E) Exception: Notwithstanding the modeling required in subsection (5)(D) of this rule, the director may require additional air quality analysis if—

1. It is likely that the emissions of the proposed construction or modification will affect air quality or the air quality standards listed in paragraphs (3)(E)3. through 7. of this rule;

2. It is likely that the construction or modification will result in the discharge of air contaminants in quantities, of characteris-

tics, and of a duration that directly and proximately cause or contribute to injury to human, plant, or animal life or the use of property; or

3. Complaints filed in the vicinity of the proposed construction or modification warrant an air quality analysis.

(F) Air Quality Analysis.

1. All estimates of ambient concentrations required under this paragraph are based on applicable air quality models, databases, and other requirements specified in the Environmental Protection Agency's (EPA) Guideline on Air Quality Models at appendix W of 40 CFR part 51 as specified in 10 CSR 10-6.030(21).

2. The air quality analysis demonstration required in subsection (5)(D) of this rule or required by the director in subsection (5)(E) of this rule is deemed to have been made if the emissions increase from the proposed construction or modification alone would cause, in all areas, air quality impacts less than the amounts listed in Table 1.

3. Table 1—Significant Levels for Air Quality Impact in Class II Areas.

Pollutant	Averaging Time				
	Annual	24-hour	8-hour	3-hour	1-hour
SO ₂	1.0	5		25	7.9
PM ₁₀		5			
PM _{2.5}	0.2	1.2			
NO ₂	1.0				7.5
CO			500		2000

Individual HAP Significant Impact Levels are equal to four (4) percent of the respective Risk Assessment Levels listed in the table referenced in subparagraph (5)(F)6.A. of this rule.

Note: All impacts in micrograms per cubic meter.

4. In the event the director requires modeling under subsection (5)(E) of this rule, ambient air concentration increases shall be limited to the applicable maximum allowable increase listed in Table 2 over the baseline concentration in any attainment or unclassified area.

5. Table 2—Ambient Air Increment Table.

Pollutant	Maximum Allowable Increase
Class I Areas	
<u>Particulate Matter 2.5 Micron:</u>	
Annual arithmetic mean	1
24-hour maximum	2
<u>Particulate Matter 10 Micron:</u>	
Annual arithmetic mean	4
24-hour maximum	8
<u>Sulfur Dioxide:</u>	
Annual arithmetic mean	2
24-hour maximum	5
3-hour maximum	25
<u>Nitrogen Dioxide:</u>	
Annual arithmetic mean	2.5
Class II Areas	
<u>Particulate Matter 2.5 Micron:</u>	
Annual arithmetic mean	4
24-hour maximum	9
<u>Particulate Matter 10 Micron:</u>	
Annual arithmetic mean	17
24-hour maximum	30
<u>Sulfur Dioxide:</u>	
Annual arithmetic mean	20
24-hour maximum	91
3-hour maximum	512
<u>Nitrogen Dioxide:</u>	
Annual arithmetic mean	25
Class III Areas	
<u>Particulate Matter 2.5 Micron:</u>	
Annual arithmetic mean	8
24-hour maximum	18

Particulate Matter 10 Micron:

Annual arithmetic mean	34
24-hour maximum	60

Sulfur Dioxide:

Annual arithmetic mean	40
24-hour maximum	182
3-hour maximum	700

Nitrogen Dioxide:

Annual arithmetic mean	50
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Notes:

1. All increases in micrograms per cubic meter. For any period other than an annual period, the applicable maximum allowable increase may be exceeded during one (1) period once per year at any one (1) location.

2. There are two (2) Class I Areas in Missouri—one (1) in Taney County (Hercules Glade) and one (1) in Wayne and Stoddard Counties (Mingo Refuge).

3. There are no Class III Areas in Missouri at this time.

6. Hazardous air pollutants table and public review.

A. The director shall maintain a table of risk assessment levels and screening model action levels for hazardous air pollutants.

B. Public review: The permitting authority will make available for public review any changes to risk assessment levels or screening model action levels of any hazardous air pollutant in accordance with the following procedures:

(I) The permitting authority issues a draft proposal for use of alternate risk assessment levels or screening model action values and any supporting information relied upon for the proposed changes by publishing a notice on the permitting authority's website;

(II) Any interested person may submit relevant information materials and views to the permitting authority, in writing, until the thirtieth (30th) day after the date of publication of the notice. The comment period may be extended by thirty (30) calendar days if a written request is received within twenty-five (25) calendar days of the original notice;

(III) The permitting authority considers all written comments submitted within the time specified in the public notice in making the final decision on the approvability of the values subject to change;

(IV) The permitting authority makes a final determination on whether to approve, approve with changes, or deny the changes;

(V) Any changes made to the proposed values as a result of public comments will go through public notice again following the procedures outlined in parts (5)(F)6.B.(I) through (V) of this rule;

(VI) Final decisions and response to comments will be made available to the public on the permitting authority's website.; and

(VII) The values become effective on the date of final publication. The permitting authority shall finalize the values within thirty (30) days from the end of the public comment period.

7. Special considerations for stack heights and dispersion techniques.

A. The degree of emission limitation necessary for control of any air pollutant under this rule is not affected in any manner by—

(I) That amount of the stack height of any installation exceeding GEP stack height; or

(II) Any other dispersion technique.

B. Paragraph (5)(F)7. of this rule does not apply to stack heights on which construction commenced on or before December 31, 1970, or to dispersion techniques implemented on

or before December 31, 1970.

C. Before the permitting authority issues a permit under this rule based on stack heights that exceed GEP, the permitting authority must notify the public of the availability of the demonstration study and provide opportunity for a public hearing.

D. This paragraph does not require that actual stack height or the use of any dispersion technique be restricted in any manner.

(6) General Construction Permit [Requirements for Construction or Emissions Increase Greater Than De Minimis Levels].

[(A) A permit shall be issued pursuant to this section only if it is determined that the proposed source operation or installation will not do one (1) or more of the following:

1. Violate any of the applicable provisions of this rule;

2. Interfere with the attainment or maintenance of NAAQS and the air quality standards established in 10 CSR 10-6.010;

3. Cause or contribute to ambient air concentrations in excess of any applicable maximum allowable increase listed in subsection (11)(A) Table 1, of this rule, over the baseline concentration in any attainment or unclassified area;

4. Violate any applicable requirements of the Air Conservation Law; and

5. Cause an adverse impact on visibility in any Class I area (those designated in paragraph (12)(I)3. of this rule).

(B) In order for the permitting authority to make this determination, each applicant shall—

1. Complete and submit application forms supplied by the permitting authority. These forms shall consist of an Application for Authority to Construct and an Emissions Information for Construction Permit Application. Both forms shall be completed so that all information necessary for processing the permit is supplied;

2. Send to the permitting authority as part of the application: site information; plans; descriptions; specifications; and drawings showing the design of the installation, the nature and amount of emissions of each pollutant, and the manner in which it will be operated and controlled;

3. Supply ambient air quality modeling data for the pollutant to determine the air quality impact of the installation on the applications with the potential to emit fifty (50) tons per year or more of particulate matter or sulfur dioxide. The modeling techniques to be used are as specified in the most recent version of the Environmental Protection Agency's (EPA) Guideline on Air Quality Models (EPA 450/2-78-027R), including supplements at the time of application, or another model which the permitting authority deems accurate. Temporary installations and portable equipment shall be exempt from this requirement provided that the source shall apply best available control technology (BACT) for each pollutant emitted in a significant amount;

4. Furnish any additional information, plans, specifications, evidence, documentation, modeling, or monitoring data that the permitting authority may require to complete review under this rule; and

5. Submit fees for the filing and processing of their permit application. The amount of the fee will be determined from section (10) of this rule.

(C) The review of each permit application will follow the procedures of subsection (12)(A), Appendix A of this rule and, when applicable, subsection (12)(B), Appendix B of this rule.

(D) Special Considerations for Stack Heights and Dispersion Techniques.

1. The degree of emission limitation required for control of any air pollutant under this rule shall not be affected in any manner by—

A. That amount of the stack height of any installation which exceeds good engineering practice (GEP) stack height; or

B. Any other dispersion technique.

2. Paragraph (6)(D)1. of this rule shall not apply to stack heights on which construction commenced on or before December 31, 1970, or to dispersion techniques implemented on or before December 31, 1970.

3. Before the permitting authority issues a permit under this rule based on stack heights that exceed GEP, the permitting authority must notify the public of the availability of the demonstration study and [must] provide opportunity for a public hearing on it.

4. This paragraph does not require that actual stack height or the use of any dispersion technique be restricted in any manner.

(E) After a permit has been granted—

1. The owner or operator subject to the provisions of this rule shall furnish the permitting authority written notification as follows:

A. A notification of the anticipated date of initial start-up of the source operation or installation within thirty (30) days of the actual date of initial start-up; and

B. A notification of the actual date of initial start-up of a source operation or installation within fifteen (15) days after that date;

2. A permit may be revoked if construction or modification work is not begun within two (2) years from the date of issuance or if work is suspended for one (1) year, and if—

A. The delay was reasonably foreseeable by the owner or operator at the time the permit was issued;

B. The delay was not due to an act of God or other conditions beyond the control of the owner or operator; or

C. Failure to revoke the permit would be unfair to other potential applicants;

3. Any owner or operator who constructs, modifies, or operates an installation not in accordance with the application submitted and the permit issued, including any terms and conditions made a part of the permit, or any owner or operator of an installation who commences construction or modification after May 13, 1982, without meeting the requirements of this rule, is in violation of this rule;

4. Approval to construct shall not relieve any owner or operator of the responsibility to comply fully with applicable provisions of the Air Conservation Law and rules or any other requirements under local, state, or federal law; and

5. The permitting authority may require monitoring of visibility in any Class I area (those designated in paragraph (12)(I)3. of this rule) near the new installation or major modification for these purposes and by such means as the permitting authority deems necessary and appropriate.]

(A) General Construction Permit Requirements. The permitting authority may issue a general construction permit in accordance with the following:

1. The general construction permit may be written to cover a category of a single emission unit, the same type of emission units, or an entire minor source if the sources in the category meet all of the following criteria:

A. Are similar in nature. Similar in nature refers to the facility size, processes, and operating conditions;

B. Have substantially similar emissions; and

C. Would be subject to the same or substantially similar requirements governing operations, emissions, monitoring, reporting, or recordkeeping.

2. The following analyses will be completed by the permitting authority in drafting the general construction permit:

A. A technical review of the source category is completed by the permitting authority to determine the appropriate level of

control, if any, as well as any emission or operational limitations for the affected emission units at the source as necessary to assure that ambient air quality is maintained; and

B. The permitting authority's analysis of the effect of the construction of the minor source or modification under the general permit on ambient air quality.

3. The general permit must contain at minimum the following elements:

A. Identification of the specific category of emission units or sources to which the general permit applies, including any criteria that the emission units or source must meet to be eligible for coverage under the general permit;

B. The emission units subject to the permit and their associated emission limitations;

C. Monitoring, recordkeeping, reporting, and testing requirements to assure compliance with the emission limitations;

D. The effective date of the general permit;

E. Any additional general permit terms and conditions as deemed necessary to assure that ambient air quality is maintained; and

F. Provisions that would prohibit the facility from violating any other applicable state or federal rule.

(B) Public Participation Requirements.

1. Before issuing a general construction permit, the permitting authority must provide a thirty (30)-calendar-day period for the public to review the general construction permit and the materials relied upon for its development. The permitting authority will solicit comments on the draft general construction permit by electronically publishing a notice on the department's website and sending a copy of the notice to the administrator.

2. The public notice will contain the following:

A. A description of the general construction permit and the category of emission units it is expected to cover;

B. The locations available for public inspection of the materials listed in paragraph (6)(B)4. of this rule. The locations at minimum shall include the Air Pollution Control Programs central office and a posting on the department's website; and

C. The procedures for submitting comments as stated in paragraph (6)(B)3. of this rule.

3. Public comment: Any interested person may submit relevant information materials and views to the permitting authority, in writing, until the end of the thirtieth (30th) day after the date of publication of the notice.

4. The following materials will be made available for public inspection during the entire public notice period: the draft general permit for each source category and the documents listed in paragraph (6)(A)2. of this rule. This will not include any confidential information as defined in 10 CSR 10-6.210.

(C) Amending the General Construction Permit. General construction permits may be modified after the general construction permit is issued. In the event that the permitting authority would like to modify any portion of the general construction permit or if the permitting authority makes changes other than clerical corrections to supporting documents, the permitting authority will undergo the public participation requirements under subsection (6)(B) of this rule before being considered final agency action.

(D) Reevaluation of the analyses conducted under paragraph (6)(A)2. of this rule will be conducted by the permitting authority for each general construction permit issued by the permitting authority every ten (10) years. The permitting authority will issue a public notice in accordance with paragraph (6)(B)2. of this rule and provide a thirty (30)-calendar-day period for the public to review the permitting authority's analyses and conclusions and to provide public comment in accordance with paragraph (6)(B)3. of this rule. If changes to the general construction permit are viewed as necessary by the permitting authority, the procedures outlined under subsection (6)(C) of this rule will be followed.

(E) The director will make available to the applicants the

following material for each general construction permit developed by the permitting authority:

1. A request for coverage form that the applicant must provide to the permitting authority to demonstrate that the new construction or modification is eligible for coverage under the general construction permit; and

2. A list of any additional information deemed necessary by the permitting authority to determine eligibility for coverage.

(F) Obtaining Coverage under a General Construction Permit.

1. If a source qualifies for a general construction permit, the owner or operator may request coverage under that permit to the permitting authority on the effective date of the permit. The effective date of each permit will be posted on the department's website.

2. A source that seeks to vary from the general construction permit, and obtain an emission limitation, control, or other requirement not contained in that permit shall apply for a permit pursuant to other sections of this rule.

3. The permitting authority must make a request for any additional information necessary to process the coverage request within ten (10) days of receipt of application.

4. The permitting authority must approve or disapprove the request for coverage under the general construction permit within thirty (30) days of receipt of the coverage request. The permitting authority shall outline the reasons for disapproval within the thirty (30)-day review period.

5. If the permitting authority makes a request for more information, the additional time needed by the applicant to submit the information is not taken into account in the thirty (30) days the permitting authority has to process the coverage request. If the permitting authority fails to notify the applicant within the thirty (30)-day period, coverage under the general construction permit is considered to be granted.

6. If the permitting authority determines that the request for coverage meets all of the requirements of the general construction permit, the permitting authority will issue notification of approval.

7. If request for coverage under a general construction permit is approved—

- A. The facility must retain a copy of the notification granting such request at the site where the source is located; and

- B. The facility must comply with all conditions and terms of the general construction permit.

(G) The director may revoke authorization of coverage under the general construction permit and require the facility to apply for and obtain an individual construction permit. Cases where an individual construction permit may be required include, but are not limited to, the following:

1. The facility is not in compliance with the conditions of the general construction permit;

2. The emission units covered under the general construction permit are part of a larger construction or modification that includes units not covered under the general construction permit; or

3. The owner or operator does not start actual construction within two (2) years of being granted coverage under the general permit.

(H) Any owner or operator authorized by a general construction permit may request to be excluded from the coverage of the permit by applying for an individual permit. When an individual permit is issued to an owner or operator otherwise subject to a general construction permit, the applicability of the general construction permit for the emission units covered under the general construction permit is terminated automatically on the effective date of the individual permit.

(I) The department must maintain and make available upon request the supporting documents used to create the general construction permit and any other material provided during the

public notice period required under subsection (6)(B) of this rule.

(J) Final Agency Action. Issuance of a general construction permit is considered final agency action with respect to all aspects of the permit except its applicability to an individual source. The sole issue that may be appealed after an individual source is approved to construct under a general construction permit is the applicability of the permit to that particular source.

(7) Nonattainment Area Major Permits. [This section applies to the construction of any new major stationary source or any project at an existing major stationary source in an area designated as nonattainment.]

(A) Definitions. Solely for the purposes of this section, the following definitions apply to terms in place of definitions for which the term is defined elsewhere.

1. **Chemical process plant**—These plants do not include ethanol production facilities that produce ethanol by natural fermentation included in NAICS codes 325193 or 312140;

2. **Major stationary source** is defined in 40 CFR 51.165(a)(1)(iv) as specified in 10 CSR 10-6.030(21);

3. **Major modification** is defined in 40 CFR 51.165(a)(1)(v) as specified in 10 CSR 10-6.030(21), except that any incorporated provisions that are stayed shall not apply. The term major, as used in this definition, means major for the nonattainment pollutant;

4. **Net emissions increase** is defined in 40 CFR 51.165(a)(1)(vi) as specified in 10 CSR 10-6.030(21); and

5. **Significant** is defined in 40 CFR 51.165(a)(1)(x) as specified in 10 CSR 10-6.030(21).

[(A)](B) Applicability Procedures. The following provisions of this subsection are used to determine, prior to beginning actual construction, if a project is a new major stationary source or a major modification at an existing [major] stationary source [is a major modification and thus subject to the permit application and review requirements of subsection (7)(B) of this rule.]:

1. Except for sources with a Plantwide Applicability Limit (PAL)[, which shall comply] in compliance with subsection [(7)(C)] (7)(D) of this rule, and in accordance with the definition of the term major modification contained in [subsection (1)(A)] paragraph (7)(A)2. of this rule, a project is a major modification if it causes two (2) types of emissions increases for the nonattainment pollutant—a significant emissions increase and a significant net emissions increase. The project is not a major modification if it does not cause a significant emissions increase. If the project causes a significant emissions increase, then the project is a major modification only if it also results in a significant net emissions increase.

2. The emissions increase from the project is determined by taking the sum of the emissions increases from each emissions unit affected by the project. An emissions unit is considered to be affected by the project if an emissions increase from the unit would occur as a result of the project, regardless of whether a physical change or change in the method of operation will occur at the particular emissions unit.

3. For each existing emissions unit affected by the project, the emissions increase is determined by taking the difference between the projected actual emissions for the completed project and the baseline actual emissions. In accordance with the definition of the term projected actual emissions found in 40 CFR 52.21 as referred to in [sub]section [(1)(A)] (2) of this rule, the owner or operator of the major stationary source may elect to use the existing emission unit's potential to emit in lieu of the projected actual emissions for this calculation.

4. For each new emissions unit affected by the project, the emissions increase is equal to the potential to emit.

5. The procedure for calculating the net emissions increase (the significance of which is the second criterion for determining if a project is a major modification) is contained in the definition of the term net emissions increase found in [sub]section [(1)(A)] (2) of this rule.

6. The provisions of subsection (7)(B) of this rule do not apply to a source or modification that would be a major stationary source or major modification only if fugitive emissions, to the extent quantifiable, are considered in calculating the potential to emit of the stationary source or modification, and the source does not belong to one (1) of the source categories listed in items (i)(1)(vii)(a)–(aa) of 40 CFR 52.21, which is incorporated by reference in subsection (8)(A) of this rule.

[(B)](C) Permit Requirements. [A permit shall not be issued, for the construction of] Permits to construct a new major stationary source for the nonattainment pollutants, or for a major modification [for the nonattainment pollutant of] to an existing major stationary source[, unless the following requirements, in addition to section (6) of this rule, are met] of nonattainment pollutants, must meet the following to be issued:

1. By the time the source is to commence operation, sufficient emissions offsets shall be obtained *[as required]* to ensure reasonable further progress toward attainment of the applicable national ambient air quality standard and consistent with the requirements of *[Section 173(a)(1)(A) of the Clean Air Act and]* paragraphs 40 CFR 51.165(a)(3) and (9) **as specified in 10 CSR 10-6.030(21);**

2. In the case of a new or modified installation *[which is]* located in a zone (within the nonattainment area) identified by the administrator, in consultation with the Secretary of Housing and Urban Development, as a zone *[to]* for which economic development should be targeted, emissions of that pollutant resulting from the proposed new or modified installation will not cause or contribute to emissions levels *[which]* exceeding the allowance permitted for that pollutant for that zone from new or modified installations;

3. Offsets have been obtained in accordance with paragraph *[(7)(B)1.](7)(C)1.* and with the *[offset and]* banking procedures in 10 CSR 10-6.410;

4. The administrator has not determined that the state implementation plan is not being adequately implemented for the nonattainment area in which the proposed source is to be constructed or modified;

5. Temporary installation and portable sources *[shall be]* are exempt from this section provided that the source applies BACT for each pollutant emitted in a significant amount;

6. The applicant *[must]* provides documentation establishing that all installations in Missouri, which are owned or operated by the applicant, (or by any entity controlling, controlled by, or under common control with the applicant) are subject to emission limitations and are in compliance, or are on a schedule for compliance, with all applicable requirements;

7. Permit applications *[shall]* include a control technology evaluation to demonstrate that any new major stationary source or major modification will meet the lowest achievable emission rate (LAER) for all new or modified emission units, unless otherwise provided in this section;

8. Any new major stationary source or major modification to be constructed in an area designated nonattainment *[shall comply]* with LAER as determined by the director and set forth in the construction permit pursuant to this section, except where otherwise provided in this section;

9. The applicant *[must]* provides an alternate site analysis; and

10. The applicant *[shall]* provides an analysis of impairment to visibility in any Class I area (those designated in *[subsection (12)(I)] 40 CFR 52.21 as incorporated by reference in subsection (8)(A) of this rule*) that would occur as a result of the installation or major modification and as a result of the general, commercial, residential, industrial, and other growth associated with the installation or major modification.

[(C)](D) Plantwide Applicability Limits (PALs). The provisions of subsection (aa) of 40 CFR 52.21, which is incorporated by reference in subsection (8)(A) of this rule, *[shall]* govern PALs of the nonattainment pollutant for projects at existing major stationary sources in an area designated nonattainment, except that—

1. The term Administrator *[shall be]* means the director of the Missouri Department of Natural Resources' Air Pollution Control Program;

2. The term BACT or LAER and the term BACT *[shall]* are both *[be]* considered LAER for the nonattainment pollutant;

3. The term Prevention of Significant Deterioration (PSD) program, as it appears in 40 CFR 52.21(aa)(1)(ii)(b), and the term major NSR program, as it appears in 52.21(aa)(1)(ii)(c), *[both shall be]* are both *[N/nonattainment A/area P]* permit programs of this section; and

4. The director shall not allow a PAL for VOC or NO_x for any existing major stationary source located in an extreme ozone nonattainment area.

[(D)](E) Reporting and Record Keeping. This subsection applies to projects at existing major stationary sources, without a PAL, which are exempt from the permit requirements of subsection *[(7)(B)] (7)(C)* of this rule as a result of the applicability determination made in subsection *[(7)(A)] (7)(B)* of this rule. The owner or operator of such sources shall comply, in regards to the nonattainment pollutant, with the provisions of paragraph (r)(6) of 40 CFR 52.21, which is incorporated by reference in subsection (8)(A) of this rule, except that the term Administrator *[shall be]* means the director of the Missouri Department of Natural Resources' Air Pollution Control Program.

[(E)](F) Any construction or modification that will impact a federal Class I area *[shall be]* is subject to the provisions of *[subsection (12)(H)] 40 CFR 52.21 as incorporated by reference in subsection (8)(A) of this rule.*

[(F)](G) [All permit applications subject to subsection (7)(B) of this rule are subject to the public participation requirements in subsection (12)(B) of this rule.] Before issuing a permit subject to this section, the permitting authority will issue a draft permit and related materials for public comment in accordance with the procedures for public participation as specified in subsection (12)(A), Appendix A of this rule.

[(G)](H) The director of the Missouri Department of Natural Resources' Air Pollution Control Program shall transmit to the administrator of the U.S. Environmental Protection Agency a copy of each permit application filed under section (7) of this rule and *[shall]* notify the administrator of each significant action taken on the application.

(8) Attainment and Unclassified Area Major Permits.

(A) All of the subsections of 40 CFR 52.21, other than (a) Plan disapproval, (q) Public participation, (s) Environmental impact statements, and (u) Delegation of authority, promulgated as of July 1, *[2012] 2018, [and Federal Register Notice 77 FR 41051 promulgated July 12, 2012, Federal Register Notice 77 FR 65107 promulgated October 25, 2012, and Federal Register Notice 76 FR 28646 promulgated May 18, 2011,]* are hereby incorporated by reference in this rule, as published by the Office of the Federal Register, *U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, DC 20408. Copies can be obtained from the U.S. Publishing Office Bookstore, 710 N. Capitol Street NW, Washington, DC 20401.* This rule does not incorporate any subsequent amendments or additions.

(B) Administrator as it appears in 40 CFR 52.21 *[shall refer to]* means the director of the Missouri Department of Natural Resources' Air Pollution Control Program except in the following, where it *[shall continue to]* refers to the administrator of the U.S. Environmental Protection Agency:

1. (b)(17) Federally enforceable;
2. (b)(37)(i) Repowering;
3. (b)(43) Prevention of Significant Deterioration (PSD) program;
4. (b)(48)(ii)(c);
5. (b)(50) Regulated NSR pollutant;
6. (b)(51) Reviewing authority;

7. (g) Redesignation;
8. (l) Air quality models;
9. (p)(2) Federal Land Manager; and
10. (t) Disputed permits or redesignations.

(C) *[All permit applications subject to section (8) of this rule are subject to the public participation requirements in subsection (12)(B) of this rule.] Before issuing a permit subject to this section, the permitting authority will issue a draft permit and related materials for public comment in accordance with the procedures for public participation as specified in subsection (12)(A), Appendix A of this rule.*

(D) The director of the Missouri Department of Natural Resources' Air Pollution Control Program shall transmit to the administrator of the U.S. Environmental Protection Agency a copy of each permit application filed under section (8) of this rule and *[shall]* notify the administrator of each significant action taken on the application.

(9) **Major Case-by-Case Hazardous Air Pollutant Permits.** *[The requirements of this section apply to any owner or operator of a major source identified in subsection (9)(B) of this rule, unless the major source in question has been specifically regulated or exempted from regulation under a standard issued pursuant to section 112(d), section 112(h), or section 112(j) of the Clean Air Act and incorporated in another subpart of part 63 of the Code of Federal Regulations (CFR), or the owner or operator of such a major source has received all necessary air quality permits for construction or reconstruction before the effective date of this section.] Case-by-case permits must meet the requirements of 40 CFR 63, subpart B as specified in paragraph (3)(A)1. of 10 CSR 10-6.075. Before issuing a permit subject to this section, the permitting authority will issue a draft permit and related materials for public comment in accordance with the procedures for public participation as specified in subsection (12)(A), Appendix A of this rule.*

[(A) Applicability. No person may construct or reconstruct a major source unless they submit an application and receive approval from the permitting authority according to the procedures of paragraphs (9)(C)2. and (9)(C)3. of this rule; or unless all of the following are satisfied:

1. All HAPs emitted by the process or production unit, that would otherwise be controlled under the requirements of this section, will be controlled by emission control equipment, which was previously installed at the same site as the process or production unit;

2. The permitting authority—

A. Has determined within a period of five (5) years prior to the fabrication, erection, or installation of the process or production unit that the existing emission control equipment represented best available control technology (BACT), lowest achievable emission rate (LAER) under 40 CFR 51 or 52, toxic-best available control technology (T-BACT), or maximum achievable control technology (MACT) based on state air toxic rules for the category of pollutants, which includes those HAPs to be emitted by the process or production unit; or

B. Determines that the control of HAP emissions provided by the existing equipment will be equivalent to that level of control currently achieved by other well-controlled similar sources (i.e., equivalent to the level of control that would be provided by a current BACT, LAER, T-BACT, or state air toxic rule MACT determination);

3. The permitting authority determines that the percent control efficiency for emissions of HAP from all sources to be controlled by the existing control equipment will be equivalent to the percent control efficiency provided by the control equipment prior to the inclusion of the new process or production unit;

4. The permitting authority has provided notice and an opportunity for public comment concerning its determination that criteria in paragraphs (9)(A)1., 2., and 3. of this rule apply and concerning the continued adequacy of any prior LAER, BACT, T-BACT, or state air toxic rule MACT determination;

5. If any commenter has asserted that a prior LAER, BACT, T-BACT, or state air toxic rule MACT determination is no longer adequate, the permitting authority has determined that the level of control required by that prior determination remains adequate;

6. The requirements of section (6) of this rule are met; and

7. Any emission limitations, work practice requirements, or other terms and conditions upon which the above determinations by the permitting authority are predicated will be construed by the permitting authority as applicable requirements under section 504(a) of the Clean Air Act and either have been incorporated into any existing part 70 permit for the affected facility or will be incorporated into such permit upon issuance.

(B) Exemptions. The requirements of section (9) of this rule do not apply to—

1. Electric utility steam generating units unless they are listed on the source category list established in accordance with section 112(c) of the Clean Air Act; or

2. Research and development activities.

(C) MACT Review and Determinations.

1. General principles.

A. The MACT emission limitation or MACT requirements recommended by the applicant and approved by the permitting authority shall not be less stringent than the emission control, which is achieved in practice by the best controlled similar source, as determined by the permitting authority.

B. Based upon available information, the MACT emission limitation and control technology recommended by the applicant and approved by the permitting authority shall achieve the maximum degree of reduction in emissions of HAPs, which can be achieved by utilizing those control technologies that can be identified from the available information, taking into consideration the costs of achieving such emission reduction and any non-air quality health and environmental impacts and energy requirements associated with the emission reduction.

C. The applicant may recommend a specific design, equipment, work practice, or operational standard, or a combination thereof, and the permitting authority may approve such a standard if the permitting authority specifically determines that it is not feasible to prescribe or enforce an emission limitation under the criteria set forth in section 112(h)(2) of the Clean Air Act.

D. The applicant has met the requirements of section (6) of this rule.

2. Application requirements for a case-by-case MACT determination.

A. An application for a MACT determination shall specify a control technology selected by the owner or operator that, if properly operated and maintained, will meet the MACT emission limitation or standard as determined according to the principles set forth in paragraph (9)(C)1. of this rule.

B. Where additional control technology or a change in control technology is required, the application for a MACT determination shall contain the following information:

(I) Emissions Information for Construction Permit Application;

(II) Standard application form and information as

described in paragraph (12)(A)4. of this rule;

(III) The anticipated date of start-up;

(IV) The estimated emission rate for each such HAP, to the extent this information is needed by the permitting authority to determine MACT;

(V) Any applicable federally-enforceable emission limitations;

(VI) The maximum and expected utilization of capacity and the associated uncontrolled emission rates for that source, to the extent this information is needed by the permitting authority to determine MACT;

(VII) The controlled emissions in tons/year at expected and maximum utilization of capacity, to the extent this information is needed by the permitting authority to determine MACT;

(VIII) A recommended emission limitation consistent with the principles set forth in paragraph (9)(C)1. of this rule;

(IX) The selected control technology to meet the recommended MACT emission limitation, including technical information on the design, operation, size, and estimated control efficiency of the control technology (and the manufacturer's name, address, telephone number, and relevant specifications and drawings, if requested by the permitting authority);

(X) Supporting documentation including identification of alternative control technologies considered by the applicant to meet the emission limitation, and analysis of cost and non-air quality health environmental impacts or energy requirements for the selected control technology; and

(XI) Any other relevant information required to be submitted by the permitting authority deemed necessary to determine MACT.

C. Where the owner or operator contends that source will be in compliance, upon start-up, with case-by-case MACT without a change in control technology, the application for a MACT determination shall contain the following information:

(I) The information described in parts (9)(C)2.B.(II) through (9)(C)2.B.(XI) of this rule to determine MACT; and

(II) Documentation of the control technology in place.

3. Administrative procedures for review of the MACT application.

A. The permitting authority will notify the owner or operator in writing, within thirty (30) days from the date the application is first received, as to whether the application for a MACT determination is complete or whether additional information is required.

B. The permitting authority will initially approve the recommended MACT emission limitation and other terms set forth in the application, or the permitting authority will notify the owner or operator in writing of its intent to disapprove the application, within thirty (30) calendar days after the owner or operator is notified in writing that the application is complete.

C. Notice of disapproval.

(I) The owner or operator may present, in writing, within sixty (60) calendar days after receipt of notice of the permitting authority's intent to disapprove the application, additional information or arguments pertaining to, or amendments to, the application for consideration by the permitting authority before it decides whether to finally disapprove the application.

(II) The permitting authority will either initially approve or issue a final disapproval of the application within ninety (90) days after it notifies the owner or operator of an

intent to disapprove or within thirty (30) days after the date additional information is received from the owner or operator, whichever is earlier.

(III) A final determination by the permitting authority to disapprove any application will be in writing and will specify the grounds on which the disapproval is based. If any application is finally disapproved, the owner or operator may submit a subsequent application, provided that the subsequent application has been amended in response to the stated grounds for the prior disapproval.

D. Incorporation of the MACT determination into a construction permit.

(I) When an application for a MACT determination is approved pursuant to this section, the construction permit issued pursuant to this rule shall contain a MACT emission limitation (or a MACT work practice standard if the permitting authority determines it is not feasible to prescribe or enforce an emission standard) to control the emissions of HAP.

(II) Such construction permit will specify any notification, operation and maintenance, performance testing, monitoring, reporting, and record-keeping requirements. Such construction permit shall include:

(a) In addition to the MACT emission limitation additional emission limits, production limits, operational limits, or other terms and conditions necessary to ensure enforceability of the MACT emission limitation;

(b) Compliance certifications, testing, monitoring, reporting, and record-keeping requirements that are consistent with the requirements of 10 CSR 10-6.065;

(c) In accordance with section 114(a)(3) of the Clean Air Act, monitoring shall be capable of demonstrating continuous compliance during the applicable reporting period. Such monitoring data shall be of sufficient quality to be used as a basis for enforcing all applicable requirements including emission limitations; and

(d) A statement requiring the owner or operator to comply with all applicable requirements.

(III) Approval shall expire if construction or reconstruction has not commenced within eighteen (18) months of issuance, unless the permitting authority has granted an extension. However, in no case will approval extend beyond thirty (30) months from the date of issuance if construction or reconstruction have not commenced.

E. Opportunity for public comment on the construction permit shall follow the procedure found in subsection (12)(B), Appendix B, Public Participation, of this rule.

F. EPA notification. The permitting authority shall send a copy of the final construction permit or other notice of approval issued to the administrator through the appropriate regional office, and to all other state and local air pollution control agencies having jurisdiction in affected states.

G. Compliance date. On and after the date of start-up, a constructed or reconstructed major source, which is subject to these requirements, shall be in compliance with all applicable requirements specified in the MACT determination.

(D) Requirements for constructed or reconstructed major sources subject to a subsequently promulgated standard or MACT requirement.

1. If an emission standard is promulgated under section 112(d) or section 112(h) of the Clean Air Act, or the state issues a determination under section 112(j) of the Clean Air Act that is applicable to a stationary source or group of sources, which would be deemed to be a constructed or reconstructed major source under this section, before the date that the owner or operator has obtained a final and legally-effective MACT determination under any of the

review options available in this rule, the owner or operator of the source(s) shall comply with the promulgated standard or determination rather than any MACT determination under this section by the state, and the owner or operator shall comply with the promulgated standard by the compliance date in the promulgated standard.

2. If an emission standard is promulgated under section 112(d) or section 112(h) of the Clean Air Act or the state issues a determination under section 112(j) of the Clean Air Act that is applicable to a stationary source or group of sources, which would be deemed to be a constructed or reconstructed major source under this section and has been subject to a prior case-by-case MACT determination pursuant to this section, and the owner or operator obtained a final and legally-effective case-by-case MACT determination prior to the promulgated date of such emission standard, then the state shall (if the initial part 70 permit has not yet been issued) issue an initial operating permit which incorporates the emission standard or determination, or shall (if the initial part 70 permit has been issued) revise the operating permit according to the reopening procedures in 40 CFR 70 or 71, whichever is relevant, to incorporate the emission standard or determination.

A. The EPA may include in the emission standard established under section 112(d) or section 112(h) of the Clean Air Act a specific compliance date for those sources which have obtained a final and legally-effective MACT determination under this section and which have submitted the information required by this section to the EPA before the close of the public comment period for the standard established under section 112(d) of the Clean Air Act. Such date shall assure that the owner or operator shall comply with the promulgated standard as expeditiously as practicable, but no longer than eight (8) years after such standard is promulgated. In that event, the state shall incorporate the applicable compliance date in the part 70 operating permit.

B. If no compliance date has been established in the promulgated section 112(d) or 112(h) standard or section 112(j) determination, for those sources which have obtained a final and legally-effective MACT determination under this section, then the permitting authority shall establish a compliance date in the permit that assures that the owner or operator shall comply with the promulgated standard or determination as expeditiously as practicable, but not longer than eight (8) years after such standard is promulgated or a section 112(j) determination is made.

3. Notwithstanding the requirements of paragraphs (9)(D)1. and 2. of this rule, if an emission standard is promulgated under section 112(d) or section 112(h) of the Clean Air Act or the state issues a determination under section 112(j) of the Clean Air Act that is applicable to a stationary source or group of sources which was deemed to be a constructed or reconstructed major source under this section and which is the subject of a prior case-by-case MACT determination pursuant to this section, and the level of control required by the emission standard issued under section 112(d) or section 112(h) or the determination issued under section 112(j) is less stringent than the level of control required by any emission limitation or standard in the prior MACT determination, the state is not required to incorporate any less stringent terms of the promulgated standard in the part 70 operating permit applicable to such source(s) and may in its discretion consider any more stringent provisions of the prior MACT determination to be applicable legal requirements when issuing or revising such operating permit.

[(10) Permit Fees and Amendments.

(A) Permit Fees.

Permit Application Type	Rule Section Reference	Filing Fee		Processing Fee	
		Existing	Effective Jan. 1, 2017	Existing	Effective Jan. 1, 2017
Portable Source Relocation Request	(4)	\$200	\$300	----	----
De minimis	(5)	\$100	\$250	\$50/hr	\$75/hr
Minor	(6)	\$100	\$250	\$50/hr	\$75/hr
NSR	(7)	\$100	\$5,000	\$50/hr	\$75/hr
PSD	(8)	\$100	\$5,000	\$50/hr	\$75/hr
HAP	(9)	\$100	\$5,000	\$50/hr	\$75/hr
Initial PAL	(7) or (8)	\$100	\$5,000	\$50/hr	\$75/hr
Renewal PAL	(7) or (8)	\$100	\$2,500	\$50/hr	\$75/hr
Temporary/Pilot	(3)	\$100	\$250	\$50/hr	\$75/hr
Permit Amendment	(10)	----	----	\$50/hr	\$75/hr

1. All installations or source operations requiring permits under this rule must submit the application with a permit filing fee to the permitting authority. Failure to submit the permit filing fee constitutes an incomplete permit application according to paragraph (12)(A)2. of this rule.

2. Upon receipt of an application for a permit or a permit amendment, a permit processing fee begins to accrue per hour of actual staff time. In lieu of the per-hour processing fee for projects subject to paragraph (4)(D)1. of this rule, a flat fee as specified in subsection (10)(A) of this rule must be submitted by the applicant.

3. The applicant shall submit fees for the processing of the permit application within ninety (90) calendar days of the final review determination, whether the permit is approved, denied, withdrawn, or not needed. After the ninety (90) calendar days, the unpaid processing fees shall have interest imposed upon the unpaid amount at the rate of ten percent (10%) per annum from the date of billing until payment is made. Failure to submit the processing fees after the ninety (90) calendar days will result in the permit being denied (revoked for portable installation location amendments) and the rejection of any future permit applications by the same applicant until the processing fee plus interest have been paid.

4. In addition to permit filing and processing fees, the applicant shall pay for any publication of notice required and shall pay for the original and one (1) copy of the transcript, to be filed with the permitting authority, of any hearing required under this rule. No permit shall be issued until all publication and transcript costs have been paid.

5. Partially processed permits that are withdrawn after submittal shall be charged at the same processing fee rate in subsection (10)(A) of this rule for the time spent processing the application.

6. The commission may reduce the permit processing fee or exempt any person from payment of the fee upon an appeal filed with the commission stating and documenting that the fee will create an unreasonable economic hardship upon the person.

7. Any person who obtains a valid permit from a city or county holding a certificate of authority granted by the commission under 643.140, RSMo, shall be deemed to have met the fee requirements of this section for that permit.

(B) Amending a Final Permit.

1. No changes in the proposed installation or modification may be made which would change any information in a finalized permit, except in accordance with this subsection.

2. If the applicant desires to make the change, the applicant shall submit in writing a request to the permitting authority that the permit be amended.

3. If the requested change will result in increased emissions, air quality impact or increment consumption, and is submitted after the final notice of permit processing fee due,

a new permit application is required for the requested change. The new application, to the maximum extent possible, should reference those portions of the original application that are unchanged. This new submittal will be subject to all requirements of this rule. The accrued permit processing fee from the original application must be submitted to the permitting authority before the new permit application can be accepted.

4. If the requested change will not result in increased emissions, air quality impact, or increment consumption, the original permit application shall be amended and the permit shall be modified pursuant to the amended application within thirty (30) calendar days of receipt of the written request. The fee for this type of change will be subject to the requirements of subsection (10)(A), except paragraph (10)(A)1., of this rule.

(11) Tables.

(A) Table 1—Ambient Air Increment Table.

Pollutant	Maximum Allowable Increase
Class I Areas	
Particulate Matter 2.5 Micron:	
Annual arithmetic mean	1
24-hour maximum	2
Particulate Matter 10 Micron:	
Annual arithmetic mean	4
24-hour maximum	8
Sulfur Dioxide:	
Annual arithmetic mean	2
24-hour maximum	5
3-hour maximum	25
Nitrogen Dioxide:	
Annual arithmetic mean	2.5
Class II Areas	
Particulate Matter 2.5 Micron:	
Annual arithmetic mean	4
24-hour maximum	9
Particulate Matter 10 Micron:	
Annual arithmetic mean	17
24-hour maximum	30
Sulfur Dioxide:	
Annual arithmetic mean	20
24-hour maximum	91
3-hour maximum	512
Nitrogen Dioxide:	
Annual arithmetic mean	25
Class III Areas	
Particulate Matter 2.5 Micron:	
Annual arithmetic mean	8
24-hour maximum	18
Particulate Matter 10 Micron:	
Annual arithmetic mean	34
24-hour maximum	60
Sulfur Dioxide:	
Annual arithmetic mean	40
24-hour maximum	182
3-hour maximum	700
Nitrogen Dioxide:	
Annual arithmetic mean	50

Notes:

1. All increases in micrograms per cubic meter. For any period other than an annual period, the applicable maximum allowable increase may be exceeded during one (1) period

once per year at any one (1) location.

2. There are two (2) Class I Areas in Missouri—one (1) in Taney County (Hercules Glade) and one (1) in Wayne and Stoddard Counties (Mingo Refuge).

3. There are no Class III Areas in Missouri at this time.

(B) Table 2—Significant Monitoring Concentrations.

Pollutant	Air Quality Impact
Carbon monoxide	575, 8-hour average
Nitrogen dioxide	14, annual
Particulate matter— 2.5 micron (PM _{2.5})	4, 24-hour
Particulate matter— 10 micron (PM ₁₀)	10, 24-hour
Sulfur dioxide	13, 24-hour
Ozone	*
Lead	.1, 3-month
Mercury	0.25, 24-hour
Beryllium	.001, 24-hour
Fluorides	0.25, 24-hour
Vinyl chloride	15, 24-hour
Total reduced sulfur	10, 1-hour
Hydrogen sulfide	0.2, 1-hour
Reduced sulfur compounds	10, 1-hour

Note: All impacts in micrograms per cubic meter.

*No significant monitoring concentration is provided for ozone. However, any potential net increase of one hundred (100) tons per year, or more, of volatile organic compounds or nitrogen oxides subject to section (8) of this rule would require an ambient impact analysis, including the gathering of ambient air quality data.

(C) Table 3—Missouri Guidelines for Valid Data Total Suspended Particulate.

Time Period	Minimum Requirement for Validity
Month	2, 24-hour samples
Quarter	10, 24-hour samples and 3 valid months
Year	45, 24-hour samples and 4 valid quarters

Continuously Monitored Data

Time Period	Minimum Requirement for Validity
3-hour running average	3 consecutive hourly observations
8-hour running average	6 hourly observations
24-hour average (daily)	18 hourly observations
Monthly	21 daily averages
Quarterly ¹	3 consecutive monthly averages
Yearly ²	11 monthly averages

¹Quarter is defined as calendar quarter.

²Year is defined as four (4) consecutive calendar quarters.

(D) Table 4—Significant Levels for Air Quality Impact in Class II Areas.

Pollutant	Annual	Averaging Time (Hours)		
		24	8	3
SO ₂	1.0	5		25
PM ₁₀	1.0	5		

$PM_{2.5}$	0.3	1.2
NO_2	1.0	
CO		.5 2

Note: All impacts in micrograms per cubic meter, except for CO in milligrams per cubic meter.]

(10) Temporary Operations and Pilot Trials.

(A) A temporary permit shall be issued pursuant to this section only if it is determined that the applicant meets the following criteria:

1. The duration of the temporary operation or pilot trial will be less than two (2) years;
2. The potential emissions from the construction or modification of an installation or source is less than one hundred (100) tons per year; and
3. The permitting authority receives the application for authority to construct prior to the start of the construction.

(B) The pilot trials covered by this section do not include pilot trials used for any of the following:

1. The production of a product for sale, unless such sale is only incidental to the use of the pilot process or process equipment; or
2. The treatment or disposal of waste that is designated, by listing or specified characteristic, as hazardous under federal regulations or state rules.

(C) This section of this rule does not apply to facilities or sources whose main operations are:

1. Experimental in nature; or
2. Characterized by frequent product changes.

(D) The director may require an air quality analysis of the temporary operation or pilot trial if it is likely that the emissions of the proposed construction or modification will affect air quality or the air quality standards listed in paragraphs (3)(E)3. through 7. of this rule or complaints filed in the vicinity of the proposed construction or modification warrant an air quality analysis.

(11) Permit Amendments to Final Permits.

(A) No changes in the proposed installation or modification may be made that would change any information in a finalized permit, except in accordance with this section.

(B) If the requested change will result in increased emissions, air quality impact, or increment consumption, and is submitted after the final notice of permit processing fee due, a new permit application is required for the requested change.

(C) Applicants with changes shall submit in writing a request for permit amendment to the permitting authority.

(D) The amendment request, at minimum, shall include the following:

1. A detailed description of the proposed changes;
2. Any changes to the emission calculations;
3. Any new requirements that will apply if the change occurs;
4. A list of permit terms and conditions that differ from those in the previous permit or application; and
5. Any other information under section (3) of this rule required by the permitting authority.

(E) Administrative Amendments.

1. For the purposes of this section, administrative amendments are those requested changes meeting any of the following criteria:

- A. Correction to typographical errors;
 - B. Addition of or changes to the language for the sole purpose of clarification of permit language; or
 - C. Changes to frequency of monitoring, recordkeeping, or reporting.
2. The permitting authority will make a final determination for an administrative amendment request no later than thirty

(30) calendar days after receipt of a written request, taking into account any additional time necessary for missing information or public notice, if applicable.

(F) Technical Amendments.

1. All other amendments involving changes to a permit will be considered technical amendments. Changes may include, but are not limited to, the following:

- A. Any proposed change to an existing process or device resulting in any change in allowable hourly or annual emissions;
- B. Any proposed change to operating or emission limitations;
- C. Any proposed change in the type of pollution control equipment specified in the existing permit; or
- D. Any proposed change resulting in the need to conduct a new air pollution modeling impact analysis.

2. The permitting authority will make a final determination for a technical amendment request in the same timeframe as listed in subsection (3)(F) of this rule for the section that the permit was initially issued under, taking into account any additional time necessary for missing information. Amendments to permits issued under section (5) of this rule will be issued no later than ninety (90) calendar days after receipt of a written request and amendments to permits issued under section (7), (8), or (9) of this rule will be issued no later than one hundred eighty four (184) calendar days after written receipt of a request.

(G) Any new submittal is subject to all requirements of this rule.

(H) The applicant must submit the accrued permit processing fee from the original application to the permitting authority before the permitting authority will accept an amendment request.

(I) Amended permit fees are subject to the requirements of paragraph (3)(D)5. of this rule.

(12) Appendices.

[(A) Appendix A, Permit Review Procedures.]

1. *Preapplication meeting.* Prior to submittal of a complete permit application, the applicant may request a preapplication meeting with the permitting authority to discuss the nature of, and apparent requirements for, the forthcoming permit application. This meeting shall not fall under the permit fee requirements.

2. *Complete application.*

A. The permitting authority shall review each application for completeness and shall inform the applicant within thirty (30) days if the application is not complete. In order to be complete, an application must include a completed application form and, to the extent not called for by the form, the information required in paragraph (12)(A)4. of this rule.

B. If the permitting authority does not notify the installation that its application is not complete within thirty (30) days of receipt of the application, the application shall be deemed complete. However, nothing in this subsection shall prevent the permitting authority from requesting additional information that is reasonably necessary to process the application.

(I) The permitting authority shall maintain a checklist to be used for the completeness determination. A copy of the checklist identifying the application's deficiencies shall be provided to the applicant along with the notice of incompleteness.

(II) If, while processing an application that has been determined or deemed to be complete, the permitting authority determines that additional information is necessary to evaluate or to take final action on that application, the permitting authority may request this additional information in writing. In requesting this information, the permitting authority shall establish a reasonable deadline for a

response. The review period will be extended by the amount of time necessary to collect the required information.

(III) In submitting an application for amendment of a construction permit, the applicant may incorporate by reference those portions of the existing permit (and the permit application and any permit amendment) that describe products, processes, operations, and emissions. The applicant must identify specifically and list which portions of the previous permit, applications, or both, are incorporated by reference. In addition, a permit amendment application must contain—

(a) Information specified in paragraph (12)(A)4. of this rule for those products, processes, operations, and emissions—

I. That are not addressed in the previous permit or application;

II. That are subject to applicable requirements that are not addressed in the previous permit or application; or

III. For which the applicant seeks permit terms and conditions that differ from those in the previous permit or application.

C. Confidential information. An applicant may submit information to the permitting authority under a claim of confidentiality pursuant to 10 CSR 10-6.210.

D. Filing fee. Each application must be accompanied by the filing fee as specified in subsection (10(A) of this rule.

3. Duty to supplement or correct application. Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application, upon becoming aware of the failure or incorrect submittal, shall promptly submit supplementary facts or corrected information. In addition, an applicant shall provide additional information, as necessary, to address any requirements that become applicable to the installation after the date an application is deemed complete, but prior to the issuance of the construction permit.

4. Standard application form and required information. The director will provide a standard application package for applicant's use. An applicant shall submit an application package consisting of the standard application form and Emissions Information for Construction Permit Application. After the effective date of this rule, any revision to the department-supplied forms will be presented to the regulated community for a forty-five (45)-day comment period. The application package must include all information needed to determine applicable requirements. The application must include information needed to determine the applicability of any applicable requirement. The applicant shall submit the information called for by the application form for each emissions unit at the installation to be permitted. The standard application form (and any attachments) shall require that the following information be provided:

A. Identifying information. The applicant's company name and address (or plant name and address if different from the company name), the owner's name and state registered agent, and the telephone number and name of the plant site manager or other contact person;

B. Processes and products. A description of the installation's processes and products (by two (2)-digit Standard Industrial Classification Code);

C. Emissions-related information. The following emissions-related information on the emission inventory forms:

(I) All emissions of regulated air pollutants. The permit application shall describe all emissions of regulated air pollutants emitted from each emissions unit, except as provided for by this section. The installation shall submit additional information related to the emissions of air pollutants

sufficient to verify which requirements are applicable;

(II) Identification and description of all emissions units whose emissions are included in part (12)(A)4.C.(I) of this rule, in sufficient detail to establish the applicability of all requirements;

(III) Emissions rates, or information that enables the permitting authority to determine such rates, in tons per year and in such terms as are necessary to establish compliance consistent with the applicable standard reference test method, if any;

(IV) Information to the extent needed to determine or regulate emissions: fuels, fuel use, raw materials, production rates, and operating schedules;

(V) Identification and description of air pollution control equipment;

(VI) Identification and description of compliance monitoring devices or activities;

(VII) Limitations on installation operations affecting emissions or any work practice standards, where applicable, for all regulated air pollutants;

(VIII) Other information required by any applicable requirement (including information related to stack height limitations developed pursuant to section 123 of the Act); and

(IX) Calculations on which the information in parts (12)(A)4.C.(I)–(VIII) of this rule is based;

D. Other specific information required under the permitting authority's rule to implement and enforce other applicable requirements of the Act or of these rules, or to determine the applicability of these requirements.

5. Certification by responsible official. Any application form or report submitted pursuant to this rule shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, and any other certification, shall be signed by a responsible official and shall contain the following language: "I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete."

6. Receipt of the complete application. Upon receipt of a complete permit application, the permitting authority shall proceed with processing of the application.

7. Notification of processing fees. Upon request, the permitting authority, as timely as possible, will notify the applicant in writing if the permit processing fee approaches one thousand dollars (\$1,000) and in one thousand-dollar (\$1,000) increments after that.

8. Public participation. For all applications for sources that emit five (5) or more tons of lead per year, or that contain good engineering practice stack height demonstrations, or that are subject to section (7) or (8) of this rule, the permitting authority shall follow the procedures for public participation as specified in section (12), Appendix (B) of this rule.

9. Final completeness determination. Final determination will be made on the following schedules:

A. The permitting authority will make final determinations for complete permit applications processed under section (7), (8), or (9) of this rule no later than one hundred eighty-four (184) calendar days after receipt of a complete application, taking into account any additional time necessary for missing information;

B. The permitting authority will make final determination for complete permit applications processed under section (3), (4), (5), or (6) of this rule no later than ninety (90) calendar days after receipt of a complete application, taking into account any additional time necessary for missing information; and

C. If the permitting authority exceeds the time for review described in subparagraph (12)(A)9.A. or B. of this rule, the applicant shall not be required to pay the processing fee associated with the application.

10. Conditions required by permitting authority. The permitting authority may impose those conditions in a permit as may be necessary to accomplish the purposes of this rule, any applicable requirements, or the Air Conservation Law, Chapter 643, RSMo, and are no less stringent than any applicable requirements. Nothing in this rule shall be deemed to limit the power of the permitting authority in this regard. The following condition examples are solely for the purposes of illustration, and do not limit the generality of the preceding liberal sentence:

A. Sampling ports of a suitable size, number, and location;

B. Safe access to each port;

C. Instrumentation to monitor and record emission data;

D. Other sampling and testing facilities;

E. Operating or work practice constraints to limit the maximum level of emissions;

F. Emission control device efficiency specifications to limit the maximum level of emissions;

G. Maximum level of emissions;

H. Emission testing after commencing operations, to be conducted by the owner or operator, as necessary to demonstrate compliance with applicable requirements or other permit conditions;

I. Data reporting; and

J. Post-construction ambient monitoring and reporting.

11. Drafts for public comment. Following review of an application, the permitting authority shall issue a draft permit for public comment, in accordance with subsection (12)(B) of this rule. The draft shall be accompanied by a statement setting forth the legal and factual basis for the draft permit conditions (including references to applicable statutory or regulatory provisions). The permitting authority shall send this statement to the administrator, to affected states, and to the applicant, and shall place a copy in the public file.

12. Additional procedures needed for unified reviews of this rule's section (6), (7), (8), or (9) unified review construction permit applications and part 70 operating permit applications.

A. Permit review by the administrator and affected states.

(I) Administrator review.

(a) Copies of applications, proposals, and final actions. The applicant will provide two (2) copies of the information included in an application. The permitting authority will forward to the administrator one (1) copy of each permit application and each final operating permit.

(b) Administrator's objection. No permit shall be issued under this rule if the administrator objects to its issuance in writing within forty-five (45) days after receipt of the proposed permit and all necessary supporting information.

(c) Failure to respond to objection. If the permitting authority does not respond to an objection of the administrator by transmitting a revised proposed permit within ninety (90) days after receipt of that objection, the administrator may issue or deny the permit in accordance with the Act.

(d) Public petitions for objection. If the administrator does not object to a proposed permit action, any person may petition the administrator to make such an objec-

tion within sixty (60) days after expiration of the administrator's forty-five (45)-day review period.

I. This petition may only be based on objections raised during the public review process, unless the petitioner demonstrates that it was impracticable to raise objection during the public review period (including when the grounds for objection arose after that period).

II. If the administrator responds to a petition filed under this section by issuing an objection, the permitting authority will not issue the permit until the objection has been resolved. If the permit was issued after the administrator's forty-five (45)-day review period, and prior to any objection by the administrator, the permitting authority shall treat that objection as if the administrator were reopening the permit for cause. In these circumstances, the petition to the administrator does not stay the effectiveness of the issued permit, and the permittee shall not be in violation of the requirement to have submitted a complete and timely permit application.

(II) Affected state review.

(a) Notice of draft actions. The permitting authority will give notice of each draft permit to any affected state on or before the time that the permitting authority provides notice to the public. Affected states may comment on the draft permit action during the period allowed for public comment, as shall be set forth in a notice to affected states.

(b) Refusal to accept recommendations. If the permitting authority refuses to accept all recommendations for a proposed permit action that any affected state has submitted during the review period, the permitting authority shall notify the administrator and the affected state in writing of its reasons for not accepting those recommendations.

B. Proposals for review. Following the end of the public comment period, the permitting authority shall prepare and submit to the administrator a proposed permit.

(I) The proposed permit shall be issued no later than forty-five (45) days after the deadline for final action under this section and shall contain all applicable requirements that have been promulgated and made applicable to the installation as of the date of issuance of the draft permit.

(II) If new requirements are promulgated or otherwise become newly applicable to the installation following the issuance of the draft permit, but before issuance of a final permit, the permitting authority may elect to either—

(a) Extend or reopen the public comment period to solicit comment on additional draft permit provisions to implement the new requirements; or

(b) If the permitting authority determines that this extension or reopening of the public comment period would delay issuance of the permit unduly, the permitting authority may include in the proposed or final permit, or both, a provision stating that the operating permit will be reopened immediately to incorporate the new requirements and stating that the new requirements are excluded from the protection of the permit shield. If the permitting authority elects to issue the proposed or final permit, or both, without incorporating the new requirements, the permitting authority, within thirty (30) days after the new requirements become applicable to the source, shall institute proceedings pursuant to this section to reopen the permit to incorporate the new requirements. These reopening proceedings may be instituted, but need not be completed, before issuance of the final permit.

C. Action following the administrator's review.

(I) Upon receipt of notice that the administrator will not object to a proposed permit that has been submitted for the administrator's review pursuant to this section, the permitting authority shall issue the permit as soon as practicable, but in no event later than the fifth day following receipt

of the notice from the administrator.

(II) Forty-five (45) days after transmittal of a proposed permit for the administrator's review, and if the administrator has not notified the permitting authority that s/he objects to the proposed permit action, the permitting authority shall promptly issue the permit, but in no event later than the fiftieth day following transmittal to the administrator.

(III) If the administrator objects to the proposed permit, the permitting authority shall consult with the administrator and the applicant, and shall submit a revised proposal to the administrator within ninety (90) days after the date of the administrator's objection. If the permitting authority does not revise the permit, the permitting authority will so inform the administrator within ninety (90) days following the date of the objection and decline to make those revisions. If the administrator disagrees with the permitting authority, the administrator may issue the permit with the revisions incorporated.

13. Notification in writing. After making a final determination whether the permit should be approved, approved with conditions, or denied, the permitting authority shall notify the applicant in writing of the final determination and the total permit processing fees due.

14. Notice of processing fees due. If payment of permit processing fees has not been received from the applicant eighty (80) calendar days after the final determination, the permitting authority shall issue in writing to the applicant a final notice of payment due.

15. Processing fees unpaid. If payment of permit processing fees has not been received from the applicant ninety (90) calendar days after the final determination, the permitting authority shall notify the applicant that the permit has been denied, provided the application previously had been approved in the final determination. The permitting authority also shall advise the applicant that the fee is still due and, as specified in paragraph (10)(A)3. of this rule, the fee shall have interest imposed upon it from the date of billing until payment is made.

16. Payment received. No later than three (3) calendar days after receipt of the whole amount of the fee due, the permitting authority will send the applicant a notice of payment received. The permit will also be issued at this time, provided the final determination was for approval and the permit processing fee was timely received.

(B) Appendix B, Public Participation.

1. This subsection shall apply to applications for unified review, as well as applications under sections (7) and (8) of this rule, applications for source operations or installations emitting five (5) or more tons of lead per year, and applications containing GEP stack height demonstrations as defined in 10 CSR 10-6.020(1)(G)3.A.-C.

2. For those applications subject to section (7) or (8) of this rule, completing the final determination within one hundred eighty-four (184) days after receipt of a complete application involves performing the following actions in a timely manner:

A. Preliminary determination. Within ninety (90) days after receipt of a complete application, the permitting authority shall make a preliminary determination whether construction should be approved, approved with conditions, or denied;

B. Draft for public comment and public hearing opportunity. No later than ten (10) days after the close of the preliminary review period, the permitting authority shall issue a draft permit and solicit comments by publishing a notice in a newspaper of general circulation within or nearest to the county in which the project is proposed to be constructed or

operated. The public notice shall describe the nature of the application, including, with reasonable specificity, the following: name, address, phone number, and representative of the agency issuing the public notice; name and address of the applicant; and the proposed project, including its location and permits applied for; a description of the amount and location of emission reductions that will offset the emissions increase from the new or modified source; and include information on how LAER was determined for the project (where appropriate). The public notice shall also include degree of increment consumption, when appropriate, the permitting authority's preliminary determination of whether or not to approve, approve with conditions or deny, and any reference to conditions relating to visibility as required in paragraph (8)(C)5. of this rule. The notice shall state that the department will hold a public hearing if one is requested, at which time any interested person may submit any relevant information, materials, and views in support of or opposed to the permit applied for. The notice shall state the location and time of the public hearing with the hearing being held in the county in which all or a major part of the proposed project is to be located and state that the hearing will be canceled if a request for a hearing is not received within twenty-eight (28) days of the publication of the notice. The hearing shall be scheduled not less than thirty (30) nor more than forty (40) days from the date of publication of the notice. The notice also shall state that any interested person may submit relevant information materials and views to the permitting authority, in writing, until the end of the fortieth day after the date of publication of the notice for public hearing. The notice shall further state that a copy of materials submitted by the applicant and used in making the preliminary determination, a copy of the preliminary determination, and a copy or summary of other materials, if any, considered in making the preliminary determination are available for public inspection at the Department of Natural Resources' regional office in the region in which the proposed installation or major modification would be constructed, as well as at the Jefferson City Central Office of the Air Pollution Control Program. The permitting authority shall submit a copy of this public notice to the administrator;

C. Availability of preliminary determination. After the close of the preliminary review period, but no later than the date public notice is published, the permitting authority shall make available to the public, until the end of the public comment period, at the regional office in the region in which the proposed installation or major modification would be constructed, as well as in the Air Pollution Control Program Office in Jefferson City, a copy of the preliminary determination, and a copy of summary of other materials, if any, considered in making the preliminary determination;

D. The permitting authority may designate another person to conduct any hearing under this section;

E. Distribution of public notice. Within ten (10) days after the close of the preliminary review period, the permitting authority shall send a copy of the public notice to the applicant and to officials and agencies having cognizance over the location where the proposed construction would occur as follows: local air pollution control agencies, the chief executive of the city and county where the installation or modification would be located, any comprehensive regional land use planning agency, any state air program permitting authority, and any Federal Land Manager (FLM) whose lands may be affected by emissions from the installation or modification;

F. Public comment and applicant response. The permitting authority shall consider all written comments submitted within the time specified in the public notice and all

comments received at the public hearing, if one is held, in making a final decision on the approvability of the application. No later than ten (10) days after the close of the public comment period, the applicant may submit a written response to any comments submitted by the public. The permitting authority shall consider the applicant's response in making a final decision. The permitting authority shall make all comments available for public inspection in the same locations where the permitting authority made available prehearing information relating to the proposed installation or modification. Further, the permitting authority shall prepare written response to all comments and make them available at the locations referred to previously;

G. *Final determination.* The permitting authority shall make a final determination whether construction should be approved, approved with conditions, or denied pursuant to this rule, then notify the applicant in writing of the final determination and make this notification available for public inspection at the same locations where the permitting authority made available prehearing information and public comments relating to the installation or modification. The permitting authority shall submit a copy of this final determination to the administrator;

H. *Public notice exception.* If the administrator has provided public notice and opportunity for public comment and hearing equivalent to that provided by this subsection, the permitting authority may make a final determination without providing public notice and opportunity for public comment and hearing required by this subsection; and

I. *Class I area visibility review and notice to the FLM.*

(I) For proposed installation subject to specific permit requirements in sections (7) and (8) of this rule, but not dependent on any quantity of lead emissions as stated in paragraph (12)(B)1. of this rule, the permitting authority shall provide advance notification to any FLM where, in the judgment of the permitting authority, visibility may be affected in a Class I area of the FLM's responsibility. The notice shall be provided within thirty (30) days of receipt of an initial application or when first learning of the applicant's intent for a permit.

(II) No later than thirty (30) days after receipt of a complete application, the permitting authority shall make written notification to the FLM whose Class I area (those designated in paragraph (12)(I)3. of this rule) may be affected by emissions from the proposed source. The notification must include all information relevant to the permit application and shall include an analysis of anticipated Class I visibility impacts. The permitting authority may also make this notification to any additional FLM whose Class I area's visibility, in the judgment of the permitting authority, may be impacted.

(III) The permitting authority shall consider any analysis performed by an FLM that is provided to the permitting authority within thirty (30) days of the FLM's receipt of the notification and analysis required in part (12)(B)2.I.(II) of this rule. Where the FLM's analysis indicates that an adverse impact on visibility (as defined in 10 CSR 10-6.020) would occur in a Class I area as a result of the proposed project, and analysis does not demonstrate an adverse impact to the permitting authority's satisfaction, the permitting authority shall so indicate the dissatisfaction in the public notice of hearing. With this condition, the public notice also shall contain the location where an explanation of the permitting authority's reasoning can be found, and that the explanation be available for public inspection no later than the date public notice is published.

3. This paragraph is for those applications not subject to section (7) or (8) of this rule, but which propose an emis-

sion of five (5) or more tons of lead per year or applications containing GEP stack height demonstrations. For these applications, completing the final determination within ninety (90) calendar days after receipt of the complete application involves performing the same public participation activities as those subject to section (7) or (8) of this rule, but with shorter time frames. The following specifies the new time frames:

A. *Permitting authority's preliminary determination—* No later than forty-five (45) calendar days after receipt of a complete application;

B. *Public notice of hearing—* No later than five (5) calendar days after the preliminary determination;

C. *Public hearing—* No later than thirty (30) calendar days after the date of the public notice; and

D. *Applicant response—* No later than five (5) calendar days after the end of the public comment period, the applicant may submit a written response to any comments submitted.

(C) *Appendix C, Offsets.* Offset provisions may be found in 10 CSR 10-6.410.

(D) *Appendix D, Banking.* Banking provisions may be found in 10 CSR 10-6.410.

(E) *Appendix E, Innovative Control Technology.*

1. An owner or operator of an installation subject to section (8) of this rule may employ a system of innovative control technology if—

A. The applicant demonstrates to the satisfaction of the permitting authority that the proposed control system will not cause or contribute to an unreasonable risk to public health, welfare, or safety in its operation, function, or malfunction;

B. The owner or operator demonstrates the ability and agrees to achieve a level of continuous emission reduction equivalent to that which would have been required under subsection (8)(A) of this rule, by a reasonable date specified by the permitting authority, taking into consideration the technical and economic feasibility. The date shall not be later than four (4) years from the time of startup or seven (7) years from permit issuance;

C. On the date specified by the permitting authority, the proposed construction, employing the system of innovative control, will meet the requirements of 40 CFR 52.21(I) and 40 CFR 52.21(v);

D. The proposed construction would not, before the date specified by the permitting authority—

(I) Cause or contribute to a violation of an applicable national ambient air quality standard;

(II) Impact any Class I area; or

(III) Impact any area where an applicable increment is known to be violated;

E. The governor of any adjacent state that will be significantly impacted by the proposed construction gives his/her consent before the date specified by the permitting authority; and

F. All other applicable requirements, including those for public participation, have been met.

2. Any approval to employ a system of innovative control technology may be revoked by the permitting authority, if—

A. The proposed system fails or will fail by the specified date to achieve the required continuous emission reduction rate; or

B. The proposed system, before the specified date, contributes or will contribute to an unreasonable risk to public health, welfare, or safety in its operation, function, or malfunction; or

C. The permitting authority determines that the proposed system is unlikely to protect the public health, welfare,

or safety.

3. If an installation to which this subsection applies fails to meet the required level of continuous emission reduction within the specified time period, or the approval is revoked in accordance with paragraph (12)(E)2. of this rule, the owner or operator may request the permitting authority to grant an extension of time for a minimum period as may be necessary to meet the requirement for the application of BACT through use of a demonstrated system of control. The period shall not extend beyond the date three (3) years after termination of the same time period specified in paragraph (12)(E)1. of this rule.

(F) Appendix F, Air Quality Models.

1. All estimates and analyses of ambient concentrations shall be based on the applicable air quality models, data bases, and other requirements specified in the Environmental Protection Agency's (EPA) Guideline on Air Quality Models (40 CFR 51, Appendix W including supplements at the time of application.

2. Any model(s) designated in paragraph (12)(F)1. of this rule may be adjusted upon a determination by the administrator and the permitting authority, after notice and opportunity for public hearing, that the adjustment is necessary to take into account unique terrain or meteorological characteristics of an area potentially affected by emissions from the source. Methods like those outlined in the Protocol for Determining the Best Performing Model (United States EPA publication No. EPA-454/R-92-025, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711, 1992) and Standard Guide for Statistical Evaluation of Atmospheric Dispersion Model Performance (NTIS No. PB 93-226082) should be used to determine the comparability of air quality models.

3. Where the Guideline on Air Quality Models (40 CFR 51, Appendix W) including supplements at the time of application does not address a situation requiring modeling, the administrator and the permitting authority, after notice and opportunity for public hearing, may approve the use of a model which they deem accurate for modeling that situation.

(G) Appendix G, Increment Tracking.

1. The permitting authority will track ambient air increment consumption at fixed baseline locations within the baseline areas.

2. Available increment will be allocated on a first-come, first-serve basis. The marked received date of a complete application will be used by the permitting authority to determine which applicant is entitled to prior allocation of increments.

3. At the intervals of five (5) years from the baseline date, the permitting authority [shall] determines the actual air quality increment available or consumed for a location(s) for which complete air monitoring data exists using subsection (11)(C), Table 3, of this rule.

4. Exclusions from increment consumption. Upon written request of the owner or operator of an installation, made after notice and opportunity for at least one (1) public hearing to be held in accordance with the procedures established in subsection (12)(B) of this rule, the permitting authority shall excludes the following concentrations in determining consumption of a maximum allowable increase:

A. Concentrations attributable to the increase in emissions from installations which have converted from the use of petroleum products, natural gas, or both, by reason of an order in effect under sections 2(a) and (b) of the Energy Supply Environmental Coordination Act of 1974 over the emissions from those sources before the effective date of the order.

B. Concentrations attributable to the increase in emis-

sions from installations which have converted from using natural gas by reason of a natural gas curtailment plan in effect pursuant to the Federal Power Act over the emissions from those sources before the effective date of the plan;

C. Concentrations of particulate matter attributable to the increase in emissions from construction or other temporary emission-related activities, however;

D. No exclusion of these concentrations shall apply more than five (5) years after the effective date of the order to which subparagraph (12)(G)4.A. of this rule refers or the plan to which subparagraph (12)(G)4.B. of this rule refers, whichever is applicable. If both the order and the plan are applicable, no exclusion shall apply more than five (5) years after the later of the effective dates.

(H) Appendix H, Impacts on Class I Areas.

1. At any time prior to the close of the public comment period specified in subsection (12)(B) of this rule, the FLM for any federal Class I area may provide information to the permitting authority demonstrating that the emissions from the proposed installation or major modification would have an adverse impact on the air quality-related values (including visibility) of any federal mandatory Class I area, notwithstanding that the change in air quality, resulting from emissions from the installation or major modification, would not cause or contribute to concentrations which would exceed the maximum allowable increase for a Class I area, as specified in subsection (11)(A), Table 1, of this rule. If the permitting authority concurs in the demonstration by the FLM, the permit shall be denied.

2. Class I variances. The owner or operator of a proposed installation or major modification may demonstrate to the FLM that the emissions from the source would have no adverse impact on the air quality-related values of any federal mandatory Class I area (including visibility), notwithstanding that the change in air quality resulting from emissions from the source would cause or contribute to concentrations which would exceed the maximum allowable increases for a Class I area. If the FLM concurs with a demonstration and so certifies to the permitting authority, the permitting authority, providing that all other applicable requirements of this rule are met, may issue the permit with those emission limitations as may be necessary to assure that emissions of sulfur dioxide, particulate matter, and nitrogen dioxide would not exceed the following maximum allowable increases over baseline concentration for these pollutants:

Pollutant	Maximum Allowable Increase
<u>Particulate Matter 2.5 Micron:</u>	
Annual arithmetic mean	4
24-hour maximum	9
<u>Particulate Matter 10 Micron:</u>	
Annual arithmetic mean	17
24-hour maximum	30
<u>Sulfur Dioxide:</u>	
Annual arithmetic mean	20
24-hour maximum	91
3-hour maximum	325
<u>Nitrogen Dioxide:</u>	
Annual arithmetic mean	25

Note: Increases are in micrograms per cubic meter.

3. Sulfur dioxide variance by governor with FLM's concurrence.

A. If the owner or operator of a proposed installation

or major modification who has been denied an FLM's certification pursuant to paragraph (12)(H)1. of this rule demonstrates to the governor that the installation or major modification cannot be constructed as a result of any maximum allowable increase for sulfur dioxide for periods of twenty-four (24) hours or less applicable to any Class I area and, in the case of federal mandatory Class I areas, that a variance under this part would not adversely affect the air quality-related values of the area (including visibility), then the governor, after consideration of the FLM's recommendation (if any) and subject to his/her concurrence, may grant, after notice and an opportunity for a public hearing, a variance from these maximum allowable increases.

B. If a variance is granted, the permitting authority may issue a permit to an installation or major modification in accordance with the requirements of paragraph (12)(H)5. of this rule, provided that all other applicable requirements of this rule are met.

4. Variance by the governor with the president's concurrence.

A. The recommendations of the governor and the FLM shall be transferred to the president in any case where the governor recommends a variance in which the FLM does not concur.

B. If this variance is approved by the president pursuant to 42 U.S.C. section 7475(d)(2)(D)(ii), the permitting authority may issue a permit in accordance with the requirements of paragraph (12)(H)5. of this rule provided that all other applicable requirements of this rule are met.

5. Emission limitations for presidential or gubernatorial variance.

A. In the case of a permit issued pursuant to paragraph (12)(H)3. or 4. of this rule, the permitting authority shall impose, as conditions of the permit, emission limitations as may be necessary to assure that emissions of sulfur dioxide from the installation or major modification (during any day on which the otherwise applicable maximum allowable increases are exceeded) will not cause or contribute to concentrations which will exceed the following maximum allowable increases over the baseline concentration:

Maximum Allowable Increase
(micrograms per cubic meter)

Period of Exposure	Terrain Areas	
	Low	High
24-hour maximum	36	62
3-hour	130	221

B. These emission limitations also shall assure that the emissions will not cause or contribute to concentrations which exceed the otherwise applicable maximum allowable increases for periods of exposure of twenty-four (24) hours or less for more than eighteen (18) days, not necessarily consecutive, during any annual period.

6. The permitting authority shall transmit to the administrator a copy of each permit application under this subsection (12)(H) of this rule and provide notice to the administrator of every action related to the consideration of a permit.

(I) Appendix I, Attainment and Unclassified Area Designations.

1. Area classification.

A. The following areas shall be Class I areas and may not be redesignated:

- (I) Hercules Glade National Wilderness Area; and
- (II) Mingo National Wilderness Area.

B. Any other area, unless specified in the legislation creating such an area, is initially designated Class II, but may

be redesignated as provided in this section.

C. The following areas may be redesignated only as Class I or II:

(I) An area which as of August 7, 1977, exceeded ten thousand (10,000) acres in size and was a national monument, a national primitive area, a national preserve, a national recreational area, a national wild and scenic river, a national wildlife refuge, or a national lakeshore or seashore; and

(II) A national park or national wilderness area established after August 7, 1977, which exceeds ten thousand (10,000) acres in size.

2. Area redesignation.

A. All areas (except as otherwise provided under paragraph (12)(I)1. of this rule) are designated Class II as of December 5, 1974. Redesignation (except as precluded by paragraph (12)(I)1. of this rule) may be proposed by the commission as provided in this rule, subject to approval by the administrator.

B. The commission may submit to the administrator a proposal to redesignate areas of the state as Class I or Class II provided that—

(I) At least one (1) public hearing has been held in accordance with procedures established in sections 643.070 and 643.100, RSMo;

(II) Other states and FLMs whose lands may be affected by the proposed redesignation were notified at least thirty (30) days prior to the public hearing;

(III) A discussion of the reasons for the proposed redesignation, including a satisfactory description and analysis of the health, environmental, economic, social, and energy effects of the proposed redesignation, was prepared and made available for public inspection at least thirty (30) days prior to the hearing and the notice announcing the hearing containing appropriate notification of the availability of that discussion;

(IV) Prior to the issuance of notice respecting the redesignation of an area that includes any federal lands, the commission has provided written notice to the appropriate FLM and afforded adequate opportunity (not in excess of sixty (60) days) to confer with the commission respecting the redesignation and to submit written comments and recommendations. In redesignating any area, with respect to which any FLM had submitted written comments and recommendations, the commission shall have published a list of any inconsistencies between the redesignation and comments and recommendations (together with the reasons for making redesignation against the recommendation of the FLM); and

(V) The commission has proposed the redesignation after consultation with the elected leadership of local and other substate general purpose governments in the area covered by the proposed redesignation.

C. Any area other than an area to which paragraph (12)(I)1. of this rule refers may be redesignated Class III if—

(I) The redesignation would meet the requirements of provisions established in accordance with subparagraph (12)(I)2.B. of this rule;

(II) The redesignation has been approved by the commission and the governor;

(III) The redesignation has been approved by the governor after consultation with the appropriate committees of the legislature if it is in session, or with the leadership of the legislature if it is not in session;

(IV) General purpose units of local government, representing a majority of the residents of the area to be redesignated, adopt resolutions concurring in the redesignation;

(V) The redesignation would not cause or contribute

to a concentration of any air pollutant which would exceed any maximum allowable increase permitted under the classification of any other area or any national ambient air quality standard; and

(VI) Any permit application for any installation or major modification subject to provisions established in accordance with subparagraph (12)(I)2.A. of this rule which could receive a permit only if the area in question were redesignated as Class III and any material submitted as part of that application were available, insofar as was practicable, for public inspection prior to any public hearing on redesignation of any area as Class III.

3. Area class designations.

Area Class	Description
Class I	Hercules Glade National Wilderness Area Mingo National Wilderness Area
Class II	All areas of the state which are not nonat- tainment
Class III	No areas designated

(J) Appendix J, Air Quality Analysis for Hazardous Air Pollutants.

1. The director shall maintain a table of emission threshold levels, risk assessment levels, and screening model action levels for hazardous air pollutants. Applicants will not be required to submit a hazardous air pollutant air quality analysis for applications having a maximum design capacity no more than the hazardous air pollutant emission threshold levels unless paragraph (12)(J)2. of this rule applies.

2. Exceptions. The director may require an air quality analysis for applications if it is likely that the construction or modification will result in the discharge of air contaminants in quantities, of characteristics, and of a duration which directly and proximately cause or contribute to injury to human, plant, or animal life or the use of property or complaints filed in the vicinity of the proposed construction or modification warrant an air quality analysis.]

(A) Appendix A, Public Participation.

1. This subsection shall apply to applications under sections (7), (8), and (9) of this rule, applications for source operations or installations emitting five (5) or more tons of lead per year, and applications containing GEP stack height demonstrations that exceed GEP.

2. For those applications subject to section (7), (8), or (9) of this rule, the permit issuance process timeline of one hundred eight four (184) days includes a forty (40)-day public comment period with an opportunity for a public hearing and the period for the permitting authority's response to comments that were submitted during the public comment period:

A. Draft for public comment and public hearing opportunity. The permitting authority shall issue a draft permit and solicit comments and requests for a public hearing by publishing a notice in a newspaper of general circulation within or nearest to the county in which the project is proposed to be constructed or operated. In lieu of the newspaper notice, the notice may be an electronic notice posted on the department's website.

B. Public notice. The public notice shall include the following:

- (I) Name, address, phone number, and representative of the agency issuing the public notice;
- (II) Name and address of the applicant;
- (III) A description of the proposed project, including its location and permits applied for;

(IV) For permits issued pursuant to section (7), a description of the amount and location of emission reductions that will offset the emissions increase from the new or modified source; and include information on how LAER was determined for the project, when appropriate;

(V) For permits issued pursuant to section (8), the degree of increment consumption, when appropriate;

(VI) The permitting authority's draft permit of whether or not to approve, approve with conditions, or deny;

(VII) The procedures as stated in subparagraph (12)(A)2.E. of this rule for the public to request a public hearing including a statement that the public hearing will be canceled if a request is not received;

(VIII) The procedures as stated in subparagraph (12)(A)2.F. of this rule for submitting public comments; and

(IX) The time and location of the public hearing if one is requested.

C. Materials made available during the public notice period. The following materials shall be made available for public inspection during the entire public notice period at the Department of Natural Resources regional office in the region in which the proposed installation or major modification would be constructed, as well as at the Air Pollution Control Program office.

(I) A copy of materials submitted by the applicant and used in making the draft permit;

(II) A copy of the draft permit; and

(III) A copy or summary of other materials, if any, considered in making the draft permit.

D. Distribution of public notice. At the start of the public notice period, the permitting authority sends a copy of the public notice to the following:

(I) The applicant; and

(II) To officials and agencies having cognizance over the location where the proposed construction would occur as follows:

(a) The administrator;

(b) Local air pollution control agencies;

(c) The chief executive of the city and county where the installation or modification would be located;

(d) Any comprehensive regional land use planning agency;

(e) Any state air program permitting authority;

(f) Any Federal Land Manager (FLM) whose lands may be affected by emissions from the installation or modification; and

(g) Any Indian Governing Body whose lands may be affected by emissions from the installation or modification.

E. Public hearing.

(I) A public hearing will be held by the department if a hearing request is received within twenty-eight (28) days of the publication of the notice. The hearing will be canceled if a request for a hearing is not received in this time frame.

(II) At the public hearing, any interested person may submit any relevant information, materials, and views in support of or opposed to the permit applied for.

(III) The public hearing shall be held in the county in which all or a major part of the proposed project is to be located.

(IV) The hearing shall be scheduled not less than thirty (30) nor more than forty (40) days from the date of publication of the notice.

(V) The permitting authority may designate another person to conduct any hearing under this section.

F. Public comment. Any interested person may submit relevant information materials and views to the permitting authority, in writing, until the end of the fortieth day after the date of publication of the notice for public hearing.

G. Public comment and applicant response. The permitting authority shall consider all written comments submitted

within the time specified in the public notice and all comments received at the public hearing, if one is held, in making a final decision on the approvability of the application. No later than ten (10) days after the close of the public comment period, the applicant may submit a written response to any comments submitted by the public. The permitting authority shall consider the applicant's response in making a final decision. The permitting authority shall make all comments available for public inspection in the same locations where the permitting authority made available prehearing information relating to the proposed installation or modification. Further, the permitting authority shall prepare a written response to all comments under the purview of the Air Pollution Control Program and make them available at the locations referred to previously.

H. Final permit. The permitting authority shall make the final permit available for public inspection at the same locations where the permitting authority made available prehearing information and public comments relating to the installation or modification. The permitting authority shall submit a copy of this final permit to the administrator.

I. Public notice exception. If the administrator has provided public notice and opportunity for public comment and hearing equivalent to that provided by this subsection, the permitting authority may make a final determination without providing public notice and opportunity for public comment and hearing required by this subsection.

3. This paragraph is for those applications not subject to section (7), (8), or (9) of this rule, but which propose an emission of five (5) or more tons of lead per year or applications containing GEP stack height demonstrations. For these applications, completing the final determination within ninety (90) calendar days after receipt of the complete application involves performing the same public participation activities as those subject to section (7), (8), or (9) of this rule, but within shorter time frames. The following specifies the new time frames:

A. Public notice shall begin no later than forty-five (45) calendar days after receipt of a complete application;

B. The public comment period will last for thirty (30) calendar days, starting with the public notice;

C. Public hearing—The public hearing will be scheduled between days twenty-three (23) and thirty (30). The permitting authority will accept comments up to the thirtieth day; and

D. Applicant response—No later than five (5) calendar days after the end of the public comment period, the applicant may submit a written response to any comments submitted.

(B) Appendix B, Unified Review. When the construction or modification and operation of any installation requires a construction permit under this rule, and an operating permit or its amendment, under 10 CSR 10-6.065, the installation will receive a unified construction and operating permit, or its amendment, and a unified review, hearing, and approval process, unless the applicant requests in writing that the application for a construction and operating permit, or its amendment, be reviewed separately. Under this unified review process, the applicant shall submit all the applications, forms, and other information required by the permitting authority.

1. Review of applications. The permitting authority completes any unified review within one hundred eighty-four (184) calendar days, as provided under the procedures of this rule and 10 CSR 10-6.065, Operating Permits Required.

2. Issuance of permits. As soon as the unified review process is completed, if the applicant complies with all applicable requirements under this rule and 10 CSR 10-6.065, the construction permit and the operating permit, or its amendment, is issued to the applicant and the applicant may commence construction. The permitting authority will retain the operating permit until validated pursuant to this section.

3. Validation of operating permits. Within one hundred

eighty (80) calendar days after commencing operation, the holder of an operating permit, or its amendment, issued by the unified review process shall submit to the permitting authority all information required by the permitting authority to demonstrate compliance with the terms and conditions of the issued operating permit, or its amendment. The permittee shall also provide information identifying any applicable requirements that became applicable subsequent to issuance of the operating permit. Within thirty (30) calendar days after the applicant's request for validation, the permitting authority will take action denying or approving validation of the issued operating permit, or its amendment. If the permittee demonstrates compliance with both the construction and operating permits, or its amendment, the permitting authority validates the operating permit, or its amendment, and forwards it to the permittee. No part 70 permit will be validated unless—

A. At the time of validation, the permitting authority certifies that the issued permit contains all applicable requirements; or

B. The procedures for permit renewal in 10 CSR 10-6.065(6)(E)3. have occurred prior to validation to ensure the inclusion of any new applicable requirements to which the part 70 permit is subject.

4. Additional procedures needed for unified reviews of this rule's section (4), (5), (6), (7), (8), (9), or (10) unified review construction permit applications and part 70 operating permit applications.

A. Permit review by the administrator and affected states.

(I) Administrator review.

(a) Copies of applications, proposals, and final actions. The applicant will provide two (2) copies of the information included in an application. The permitting authority will forward to the administrator one (1) copy of each permit application and each final operating permit.

(b) Administrator's objection. No permit shall be issued under this rule if the administrator objects to its issuance in writing within forty-five (45) days after receipt of the proposed permit and all necessary supporting information.

(c) Failure to respond to objection. If the permitting authority does not respond to an objection of the administrator by transmitting a revised proposed permit within ninety (90) calendar days after receipt of that objection, the administrator may issue or deny the permit in accordance with the Act.

(d) Public petitions for objection. If the administrator does not object to a proposed permit action, any person may petition the administrator to make such an objection within sixty (60) days after expiration of the administrator's forty-five (45)-day review period.

I. This petition may only be based on objections raised during the public review process, unless the petitioner demonstrates that it was impracticable to raise objection during the public review period (including when the grounds for objection arose after that period).

II. If the administrator responds to a petition filed under this section by issuing an objection, the permitting authority will not issue the permit until the objection has been resolved. If the permit was issued after the administrator's forty-five (45)-day review period, and prior to any objection by the administrator, the permitting authority shall treat that objection as if the administrator were reopening the permit for cause. In these circumstances, the petition to the administrator does not stay the effectiveness of the issued permit, and the permittee shall not be in violation of the requirement to have submitted a complete and timely permit application.

(II) Affected state review.

(a) Notice of draft actions. The permitting authority will give notice of each draft permit to any affected state on or before the time that the permitting authority provides notice to

the public. Affected states may comment on the draft permit action during the period allowed for public comment, as shall be set forth in a notice to affected states.

(b) Refusal to accept recommendations. If the permitting authority refuses to accept all recommendations for a proposed permit action that any affected state has submitted during the review period, the permitting authority shall notify the administrator and the affected state in writing of its reasons for not accepting those recommendations.

B. Proposals for review. Following the end of the public comment period, the permitting authority shall prepare and submit to the administrator a proposed permit.

(I) The proposed permit shall be issued no later than forty-five (45) days after the deadline for final action under this section and shall contain all applicable requirements that have been promulgated and made applicable to the installation as of the date of issuance of the draft permit.

(II) If new requirements are promulgated or otherwise become newly applicable to the installation following the issuance of the draft permit, but before issuance of a final permit, the permitting authority may elect to either—

(a) Extend or reopen the public comment period to solicit comments on additional draft permit provisions to implement the new requirements; or

(b) If the permitting authority determines that this extension or reopening of the public comment period would delay issuance of the permit unduly, the permitting authority may include in the proposed or final permit, or both, a provision stating that the operating permit will be reopened immediately to incorporate the new requirements and stating that the new requirements are excluded from the protection of the permit shield. If the permitting authority elects to issue the proposed or final permit, or both, without incorporating the new requirements, the permitting authority, within thirty (30) calendar days after the new requirements become applicable to the source, shall institute proceedings pursuant to this section to reopen the permit to incorporate the new requirements. These reopening proceedings may be instituted, but need not be completed, before issuance of the final permit.

C. Action following the administrator's review.

(I) Upon receipt of notice that the administrator will not object to a proposed permit that has been submitted for the administrator's review pursuant to this section, the permitting authority shall issue the permit as soon as practicable, but in no event later than the fifth day following receipt of the notice from the administrator.

(II) Forty-five (45) days after transmittal of a proposed permit for the administrator's review, and if the administrator has not notified the permitting authority that s/he objects to the proposed permit action, the permitting authority shall promptly issue the permit, but in no event later than the fiftieth day following transmittal to the administrator.

(III) If the administrator objects to the proposed permit, the permitting authority shall consult with the administrator and the applicant, and shall submit a revised proposal to the administrator within ninety (90) calendar days after the date of the administrator's objection. If the permitting authority does not revise the permit, the permitting authority will so inform the administrator within ninety (90) calendar days following the date of the objection and decline to make those revisions. If the administrator disagrees with the permitting authority, the administrator may issue the permit with the revisions incorporated.

(C) Appendix C, Increment Tracking.

1. The permitting authority will track ambient air increment consumption within the baseline area.

2. Available increment will be allocated on a first-come, first-serve basis. The marked received date of a complete appli-

cation will be used by the permitting authority to determine which applicant is entitled to prior allocation of increments.

3. At the intervals of five (5) years from the minor source baseline date, the permitting authority shall determine the actual air quality increment available or consumed for each baseline area.

AUTHORITY: section 643.050, RSMo [Supp. 2013] 2016. Original rule filed Dec. 10, 1979, effective April 11, 1980. For intervening history, please consult the Code of State Regulations. Amended: Filed June 29, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate. The public entity fiscal cost impacts for compliance with the federal standards are accounted for in the federal rulemakings.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate. The private entity fiscal cost impacts for compliance with the federal standards are accounted for in the federal rulemakings.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed amendment will begin at 9:00 a.m., September 27, 2018. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded to any interested person. Interested persons, whether or not heard, may submit a statement of their views until 5:00 p.m., October 4, 2018. Send online comments via the proposed rules web page www.dnr.mo.gov/proposed-rules, email comments to apcprulespn@dnr.mo.gov, or written comments to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 6—Air Quality Standards, Definitions, Sampling
and Reference Methods and Air Pollution Control
Regulations for the Entire State of Missouri**

PROPOSED AMENDMENT

10 CSR 10-6.062 Construction Permits By Rule. The commission proposes to amend sections (1), (2), and (4), and subsection (3)(B). If the commission adopts this rule action, the department intends to submit this rule amendment to the U.S. Environmental Protection Agency to replace the current rule that is in the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Proposed Rules website www.dnr.mo.gov/proposed-rules.

PURPOSE: This rule creates a process by which sources can be exempt from 10 CSR 10-6.060 Construction Permits Required, by establishing conditions under which specific sources can construct and operate. It establishes notification requirements and standard review fees. It has been determined that these sources will not make a significant contribution of air contaminants to the atmosphere. This amendment allows crematories and animal incinerators a more practical compliance option and modifies the restrictions on what these units are allowed to incinerate, matches federal sulfur limits on

Number 2 diesel oil, removes any unnecessary restrictive words, and adds back definitions specific to this rule. The evidence supporting the need for this proposed rulemaking, per 536.016, RSMo, is Executive Order 17-03 Red Tape Reduction Review and related comments.

(1) Applicability. This rule *[shall apply]* applies to certain types of facilities or changes within facilities listed in this rule where construction is commenced on or after the effective date of the relevant permit-by-rule. To qualify for a permit-by-rule, the following general requirements must be met:

(2) Definitions. *[Definitions of certain terms specified in this rule may be found in 10 CSR 10-6.020.]*

(A) As applied—The volatile organic compound and solids content of the finishing material that is actually used for coating the substrate. It includes the contribution of materials used for in-house dilution of the finishing material.

(B) Closed container—A container with a cover fastened in place so that it will not allow leakage or spilling of the contents.

(C) Construction—Fabricating, erecting, reconstructing, or installing a source operation. Construction includes installation of building supports and foundations, laying of underground pipe work, building of permanent storage structures, and other construction activities related to the source operation.

(D) Incinerator—Any article, machine, equipment, contrivance, structure, or part of a structure used to burn refuse or to process refuse material by burning other than by open burning.

(E) Malfunction—A sudden and unavoidable failure of air pollution control equipment or process equipment or of a process to operate in a normal and usual manner. Excess emissions caused by improper design shall not be deemed a malfunction.

(F) Manure storage and application systems—Any system that includes, but is not limited to lagoons, manure treatment cells, earthen storage ponds, manure storage tanks, manure stockpiles, composting areas, pits and gutters within barns, litter used in bedding systems, all types of land application equipment, and all pipes, hoses, pumps, and other equipment used to transfer manure.

(G) Material safety data sheet—The chemical, physical, technical, and safety information document supplied by the manufacturer of the coating, solvent, or other chemical product.

(H) Opacity—The extent to which airborne material obstructs the transmission of incident light and obscures the visual background. Opacity is stated as a percentage of light obstructed and can be measured by a continuous opacity monitoring system or a trained observer. An opacity of one hundred percent (100%) represents a condition in which no light is transmitted, and the background is completely obscured.

(I) Printing—Any operation that imparts color, images, or text onto a substrate using printing inks.

(J) Responsible official—Includes one (1) of the following:

1. The president, secretary, treasurer, or vice-president of a corporation in charge of a principal business function, any other person who performs similar policy and decision-making functions for the corporation, or a duly authorized representative of this person if the representative is responsible for the overall operation of one (1) or more manufacturing, production, or operating facilities applying for or subject to a permit and either—

A. The facilities employ more than two hundred fifty (250) persons or have a gross annual sales or expenditures exceeding twenty-five (25) million dollars (in second quarter 1980 dollars); or

B. The delegation of authority to this representative is approved in advance by the permitting authority;

2. A general partner in a partnership or the proprietor in a sole proprietorship;

3. Either a principal executive officer or ranking elected official in a municipality or state, federal, or other public agency. For the purpose of this subparagraph, a principal executive officer of a federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency; or

4. The designated representative of an affected source insofar as actions, standards, requirements, or prohibitions under Title IV of the Act or the regulations promulgated under the Act are concerned and the designated representative for any other purposes under part 70.

(K) Sludge—Any solid, semisolid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility, exclusive of the treated effluent from a wastewater treatment plant.

(L) Definitions of certain terms used in this rule, other than those specified in this rule, may be found in 10 CSR 10-6.020.

(3) General Provisions.

(B) Permit-by-Rule.

1. Printing operations. Any printing operation (including, but not limited to, screen printers, ink-jet printers, presses using electron beam or ultraviolet light curing, and labeling operations) and supporting equipment (including, but not limited to, corona treaters, curing lamps, preparation, and cleaning equipment) which operate in compliance with the following conditions is permitted under this rule:

A. The uncontrolled emission of volatile organic compounds (VOCs) from inks and solvents (including, but not limited to, those used for printing, cleanup, or makeup) *[shall]* does not exceed forty (40) tons per twelve (12)-month period, rolled monthly, for all printing operations on the property. The emissions shall be calculated using a material balance that assumes that all of the VOCs in the inks and solvents used are directly emitted to the atmosphere;

B. The uncontrolled emission of hazardous air pollutants *[shall]* does not exceed ten (10) tons per twelve (12)-month period, rolled monthly, for all printing operations on the property. The emissions shall be calculated using a material balance that assumes that all hazardous air pollutants used are directly emitted to the atmosphere;

C. Copying and duplicating equipment employing the xerographic method are exempt from subparagraphs (3)(B)1.D–G. of this rule;

D. Printing presses covered by this section *[shall]* do not utilize heat set, thermo set, or oven-dried inks. Heated air may be used to shorten drying time, provided the temperature does not exceed one hundred ninety-four degrees Fahrenheit (194°F);

E. Screen printing operations requiring temperatures greater than one hundred ninety-four degrees Fahrenheit (194°F) to set the ink are exempt from subparagraph (3)(B)1.D. of this rule;

F. The facility *[shall]* is not *[be]* located in an ozone nonattainment area; and

G. Record keeping. The operator shall maintain records of ink and solvent usage and shall be kept in sufficient detail to show compliance with subparagraphs (3)(B)1.A. and 1.B. of this rule.

2. Crematories and animal incinerators. Any crematory or animal incinerator that *[is used solely for the cremation]* burns for disposal ninety percent (90%) or more by weight (on a calendar quarter basis and excluding the weight of auxiliary fuel and combustion air) of human remains, *[disposal of]* human pathological wastes, or animal carcasses and operates in compliance with the following conditions is permitted under this rule:

A. The materials to be disposed of *[shall be]* are limited to noninfectious human materials removed during surgery, labor and delivery, autopsy, or biopsy including body parts, tissues and fetuses, organs, bulk blood and body fluids, blood or tissue laboratory specimens; and other noninfectious anatomical remains or animal carcasses

in whole or in part. **Illegal and waste pharmaceutical drugs may also be burned for disposal provided they constitute less than ten percent (10%) by weight (on a calendar quarter basis and excluding the weight of auxiliary fuel and combustion air).** The owner or operator shall minimize the amount of packaging fed to the incinerator, particularly plastic containing chlorine. The incinerators shall not be used to dispose of other non-biological medical wastes including, but not limited to, sharps, rubber gloves, intravenous bags, tubing, and metal parts;

B. The manufacturer's rated capacity (burn rate) *[shall be]* is two hundred (200) pounds per hour or less;

C. The incinerator *[shall be]* is a dual-chamber design;

D. Burners *[shall be]* are located in each chamber, sized to manufacturer's specifications, and operated as necessary to maintain the minimum temperature requirements of subparagraph (3)(B)2.E. of this rule at all times when the unit is burning waste;

E. *[Excluding crematories, the secondary chamber shall be designed to maintain a temperature of one thousand six hundred degrees Fahrenheit (1,600°F) or more with a gas residence time of one-half (1/2) second or more.]* The secondary combustion chamber shall be designed to maintain a temperature and gas residence time either in accordance with manufacturer's specification or stack test results that demonstrate a ninety-nine point nine percent (99.9%) combustion efficiency. The temperature shall be monitored with equipment that is accurate to plus or minus two percent (+2%) and continuously recorded. The thermocouples or radiation pyrometers shall be fitted to the incinerator and wired into a manual reset noise alarm such that if the temperature in either of the two (2) chambers falls below the minimum temperature above, the alarm will sound at which time plant personnel shall take immediate measures to either correct the problem or cease operation of the incinerator until the problem is corrected;

F. There *[shall be]* are no obstructions to stack flow, such as by rain caps, unless such devices are designed to automatically open when the incinerator is operated. Properly installed and maintained spark arresters are not considered obstructions;

G. Each incinerator operator *[shall be]* is trained in the incinerator operating procedures as developed by the American Society of Mechanical Engineers (ASME), by the incinerator manufacturer, or by a trained individual with more than one (1) year experience in the operation of the incinerator that the trainee will be operating. Minimum training shall include basic combustion control parameters of the incinerator and all emergency procedures to be followed should the incinerator malfunction or exceed operating parameters. An operator who meets the training requirements of this condition shall be on duty and immediately accessible during all periods of incinerator operation. The manufacturer's operating instructions and guidelines shall be posted at the unit and the unit shall be operated in accordance with these instructions;

H. The incinerator *[shall have]* has an opacity of less than ten percent (10%) at all times;

I. Heat *[shall be]* is provided by the combustion of natural gas, liquid petroleum gas, or Number 2 fuel oil with less than *[three-tenths percent (0.3%)] fifteen ten thousandths percent (0.0015%)* sulfur by weight, or by electric power; and

J. Record keeping. The operator shall maintain a log of all alarm trips and the resultant action taken. A written certification of the appropriate training received by the operator, with the date of training, that includes a list of the instructor's qualifications or ASME certification school shall be maintained for each operator. The operator shall maintain an accurate record of the monthly amount and type of waste combusted.

3. Surface coating. Any surface coating activity or stripping facility that operates in compliance with the following conditions is permitted under this rule:

A. Metalizing, spraying molten metal onto a surface to form a coating, is not permitted under this permit-by-rule. The use of coat-

ings that contain metallic pigments is permitted;

B. All facilities *[shall]* implement good housekeeping procedures to minimize fugitive emissions, including:

(I) *[All spills shall be cleaned]* Cleaning up spills immediately;

(II) *[The] Operating* booth or work area exhaust fans *[shall be operating]* when cleaning spray guns and other equipment; and

(III) *[All] Storing* new and used coatings and solvents *[shall be stored]* in closed containers~~...~~ and removing *[A]all* waste coatings and solvents *[shall be removed]* from the site by an authorized disposal service or *[disposed]* disposing of them at a permitted on-site waste management facility;

C. Drying and curing ovens *[shall]* are either *[be]* electric or meet the following conditions:

(I) The maximum heat input to any oven must not exceed forty (40) million British thermal units (Btus) per hour; and

(II) Heat shall be provided by the combustion of one (1) of the following: natural gas; liquid petroleum gas; fuel gas containing no more than twenty (20.0) grains of total sulfur compounds (calculated as sulfur) per one hundred (100) dry standard cubic feet; or Number 2 fuel oil with not more than *[three-tenths percent (0.3%)] fifteen ten thousandths percent (0.0015%)* sulfur by weight;

D. Emissions *[shall be]* are calculated using a material balance that assumes that all VOCs and hazardous air pollutants in the paints and solvents used are directly emitted to the atmosphere. The total uncontrolled emissions from the coating materials (as applied) and cleanup solvents shall not exceed the following for all operations:

(I) Forty (40) tons per twelve (12)-month period, rolled monthly, of VOCs for all surface coating operations on the property;

(II) A sum of twenty-five (25) tons per twelve (12)-month period, rolled monthly, of all hazardous air pollutants for all surface coating operations on the property; and

(III) Each individual hazardous air pollutant shall not exceed the emission threshold levels established in 10 CSR 10-6.060(12)(J), rolled monthly;

E. The surface coating operations *[shall be]* are performed indoors, in a booth, or in an enclosed work area. The booth shall be designed to meet a minimum face velocity at the intake opening of each booth or work area of one hundred feet (100') per minute. Emissions shall be exhausted through elevated stacks that extend at least one and one-half (1 1/2) times the building height above ground level. All stacks shall discharge vertically. There shall be no obstructions to stack flow, such as rain caps, unless such services are designed to automatically open when booths are operated;

F. For spraying operations, emissions of particulate matter *[must be]* are controlled using either a water wash system or a dry filter system with a ninety-five percent (95%) removal efficiency as documented by the manufacturer. The face velocity at the filter shall not exceed two hundred fifty feet (250') per minute or that specified by the filter manufacturer, whichever is less. Filters shall be replaced according to the manufacturer's schedule or whenever the pressure drop across the filter no longer meets the manufacturer's recommendation;

G. Coating operations *[shall be]* are conducted at least fifty feet (50') from the property line and at least two hundred fifty feet (250') from any recreational area, residence, or other structure not occupied or used solely by the owner or operator of the facility or the owner of the property upon which the facility is located;

H. The facility *[shall]* is not *[be]* located in an ozone nonattainment area; and

I. Record keeping. The operator shall maintain the following records and reports:

(I) All material safety data sheets for all coating materials and solvents;

(II) A monthly report indicating the days the surface coating operation was in operation and the total tons emitted during the

month, and the calculation showing compliance with the rolling average emission limits of subparagraph (3)(B)3.D. of this rule;

(III) A set of example calculations showing the method of data reduction including units, conversion factors, assumptions, and the basis of the assumptions; and

(IV) These reports and records shall be immediately available for inspection at the installation.

4. Livestock markets and livestock operations. Any livestock market or livestock operation including animal feeding operations and concentrated animal feeding operations as those terms are defined by 40 CFR 122.23, that was constructed after November 30, 2003, and operates in compliance with the following conditions is permitted under this rule. In addition, any manure storage and application system directly associated with the livestock markets or livestock operations such that these manure storage and application systems are operated in compliance with the following conditions are also permitted under this rule:

A. All facilities *[shall]* implement the following building cleanliness and ventilation practices:

(I) Buildings *[shall be]* are cleaned thoroughly between groups of animals;

(II) Manure and spilled feed *[shall be]* are scraped from aisles on a regular basis, at least once per week;

(III) Ventilation fans, louvers, and cowlings *[shall be]* are regularly cleaned to prevent excessive buildup of dust, dirt, or other debris that impairs performance of the ventilation system;

(IV) Air inlets *[shall be]* are cleaned regularly to prevent excessive buildup of dust, dirt, or other debris that reduces airflow through the inlets;

(V) Ceiling air inlets *[shall be]* are adjusted to provide adequate airflow (based on design ventilation rates) to the building interior;

(VI) For high-rise structures, the manure storage area *[must]* include engineered natural or mechanical ventilation. This ventilation must be maintained and cleaned regularly to prevent excessive buildup of dust, dirt, or other debris that impairs performance of the ventilation system;

(VII) For deep-bedded structures, bedding and/or litter used in the animal living area *[must be]* is maintained in a reasonably clean condition. Indications that the bedding is not reasonably clean include extensive caking, manure coating animals or birds, and the inability to distinguish bedding material from manure. Bedding or litter with excessive manure shall be removed and replaced with clean bedding or litter; and

(VIII) For automatic feed delivery systems, feed lines *[shall]* have drop tubes that extend into the feeder to minimize dust generation;

B. All facilities *[shall]* implement the following manure storage practices:

(I) Buildings with flush alleys, scrapers, or manure belts *[shall be]* are operated to remove manure on a regular schedule, at least daily;

(II) Buildings with shallow pits, four feet (4') deep or less, *[shall be]* are emptied on a regular schedule, at least once every fourteen (14) days;

(III) Feed, other than small amounts spilled by the animals, *[shall]* is not *[be]* disposed of in the manure storage system;

(IV) All lagoons *[shall be]* are regularly monitored for solids buildup, at least once every five (5) years. Lagoon sludge shall be removed and properly disposed of when the sludge volume equals the designed sludge volume; and

(V) Manure compost piles or windrows *[shall be]* are turned or otherwise mixed regularly so that the temperature within the pile or windrow is maintained between one hundred five degrees Fahrenheit (105°F) and one hundred fifty degrees Fahrenheit (150°F);

C. The operator *[shall]* considers wind direction and velocity when conducting surface land application, and manure *[shall]* is not

[be] applied within five hundred (500') feet from a downwind inhabited residence;

D. Dead animals *[shall]* are not *[be]* disposed of in the manure storage system unless the system is specifically designed and managed to allow composting of dead animals. Dead animals shall be removed from buildings daily; and

E. Record keeping. *(Not Applicable)*

(4) Reporting and Record Keeping. In addition to the original notification required by paragraph (3)(A)2. of this rule, operators shall maintain records containing sufficient information to demonstrate compliance with all applicable permit-by-rule requirements as specified in subsection (3)(B) of this rule. These records shall be maintained at the installation for a minimum of five (5) years, and *[shall be]* made immediately available to inspectors upon their request. Operators shall also report to the Air Pollution Control Program, no later than ten (10) days after the end of the month during which the operation exceeded any of the permit-by-rule conditions.

AUTHORITY: section 643.050, RSMo [2000] 2016. Original rule filed March 5, 2003, effective Oct. 30, 2003. Amended: Filed Sept. 27, 2006, effective May 30, 2007. Amended: Filed June 21, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed amendment will begin at 9:00 a.m., September 27, 2018. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded any interested person. Interested persons, whether or not heard, may submit a statement of their views until 5:00 p.m., October 4, 2018. Send online comments via the proposed rules web page www.dnr.mo.gov/proposed-rules, email comments to apcprulespn@dnr.mo.gov, or written comments to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176.

Title 10—DEPARTMENT OF NATURAL RESOURCES

Division 10—Air Conservation Commission

Chapter 6—Air Quality Standards, Definitions, Sampling and Reference Methods and Air Pollution Control

Regulations for the Entire State of Missouri

PROPOSED AMENDMENT

10 CSR 10-6.065 Operating Permits. The commission proposes to amend sections (1), (2), and (3); existing subsections (5)(B)–(5)(F), (6)(B)–(6)(F), (7)(B), and (7)(G); remove existing section (4); and renumber sections (5), (6), and (7) to sections (4), (5), and (6), respectively. If the commission adopts this rule action, the department intends to submit this rule amendment to the U.S. Environmental Protection Agency to replace the current rule that is in the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Proposed Rules website www.dnr.mo.gov/proposed-rules.

PURPOSE: *This rule defines air contaminant sources which are required to obtain operating permits and establishes procedures for obtaining and complying with operating permits; it does not establish any air quality standards or guidelines. The purpose of this rulemaking is to remove the requirement to have a Basic State Operating Permit from the rule. This rulemaking will also remove the requirement to have permits for certain greenhouse gas sources. In addition, this rulemaking will correct references and change the term “regulated pollutant” to “regulated air pollutant” to match the federal use of term. This rulemaking will also comply with Executive Order 17-03 criteria and will remove any unnecessary use of restrictive words, add definitions specific to this rule, and make administrative updates. Due to recent discussions with EPA regarding the appropriate use of director discretion, we will also review usages of director discretion statements and revise them as necessary. The evidence supporting the need for this proposed rulemaking, per 536.016, RSMo, is the U.S. Supreme Court Decision in *Utility Air Regulatory Group vs. EPA* dated June 23, 2014, and *Executive Order 17-03 Red Tape Reduction Review* and related comments.*

(1) Applicability.

(A) Part 70[,] and Intermediate [and Basic State] Installations. This rule shall apply to existing, modified, reconstructed, and new installations, whether part 70 or intermediate [or basic state] throughout Missouri.

(B) Exempt Installations and Emission Units. The following installations and emission units are exempt from the requirements of this rule unless such units are part 70 or intermediate installations or are located at part 70 or intermediate installations. Emissions from exempt installations and emission units shall be considered when determining if the installation is a part 70 or intermediate installation:

1. Any installation that [would be required to] obtains a permit solely because it is subject to 10 CSR 10-6.070(7)(AAA) Standards of Performance for New Residential Wood Heaters;
2. Any installation that [would be required to] obtains a permit solely because it is subject to 10 CSR 10-6.[240/241] or 10 CSR 10-6.250;
3. Single or multiple family dwelling units for not more than three (3) families;
4. Comfort air conditioning or comfort ventilating systems not designed or used to remove air contaminants generated by, or released from, specific units of equipment;
5. Equipment used for any mode of transportation;
6. Livestock markets and livestock operations, including animal feeding operations and concentrated animal feeding operations as those terms are defined by 40 CFR 122.23 and all manure storage and application systems associated with livestock markets or livestock operations. **40 CFR 122.23 promulgated as of July 1, 2018 is hereby incorporated by reference as published by the Office of the Federal Register. Copies can be obtained from the U.S. Publishing Office Bookstore, 710 N. Capitol Street NW, Washington DC 20401. This rule does not incorporate any subsequent amendments or additions;**
7. Restaurants and other retail establishments for the purpose of preparing food for employee and guest consumption;
8. Fugitive dust controls unless a control efficiency can be assigned to the equipment or control equipment;
9. Equipment or control equipment which eliminates all emissions to the ambient air;
10. Equipment, including air pollution control equipment, but not including an anaerobic lagoon, that emits odors but no regulated air pollutants;
11. Residential wood heaters, cookstoves, or fireplaces;
12. Laboratory equipment used exclusively for chemical and physical analysis or experimentation is exempt, except equipment used for controlling radioactive air contaminants;
13. Recreational fireplaces;

14. Stacks or vents to prevent the escape of sewer gases through plumbing traps for systems handling domestic sewage only. Systems which include any industrial waste do not qualify for this exemption;

15. Combustion equipment that—

A. Emits only combustion products;

B. Produces less than one hundred fifty (150) pounds per day of any air contaminant; and

C. Has a maximum rated capacity of—

(I) Less than ten (10) million British thermal units (Btus) per hour heat input by using exclusively natural or liquefied petroleum gas, or any combination of these; or

(II) Less than one (1) million Btus per hour heat input;

16. Office and commercial buildings, where emissions result solely from space heaters using natural gas or liquefied petroleum gas with a maximum rated capacity of less than twenty (20) million Btus per hour heat input. Incinerators operated in conjunction with these sources are not exempt;

17. Any country grain elevator that never handles more than 1,238,657 bushels of grain during any twelve (12)-month period and is not located within an incorporated area with a population of fifty thousand (50,000) or more. A country grain elevator is defined as a grain elevator that receives more than fifty percent (50%) of its grain from producers in the immediate vicinity during the harvest season. This exemption does not include grain terminals which are defined as grain elevators that receive grain primarily from other grain elevators. To qualify for this exemption, the owner or operator of the facility shall retain monthly records of grain origin and bushels of grain received, processed and stored for a minimum of five (5) years to verify the exemption requirements. Monthly records must be tabulated within seven (7) days of the end of the month. Tabulated monthly records shall be made available immediately to Missouri Department of Natural Resources’ representatives for an announced inspection or within three (3) hours for an unannounced visit;

18. Sand and gravel operations that have a maximum capacity to produce less than seventeen and one-half (17.5) tons of product per hour and use only natural gas as fuel when drying;

19. Noncommercial incineration of dead animals, the on-site incineration of resident animals for which no consideration is received or commercial profit is realized, as authorized in section 269.020.6, RSMo; and

20. Any asphaltic concrete plant, concrete batching plant, or rock crushing plant that can be classified as a portable equipment installation[, as defined in 10 CSR 10-6.020] **by meeting the portable equipment requirements of, or having a portable equipment permit according to 10 CSR 10-6.060.**

(C) Prohibitions.

1. After the effective date of this rule, no person shall operate a part 70 installation[,] or intermediate installation[, or basic state installation] except in compliance with an operating permit issued by the permitting authority in accordance with this rule.

2. Except as specified in this rule or in the operating permit, it is not a violation of this rule for a permitted installation to be operated in ways that are not addressed in, constrained by, or prohibited by the operating permit.

(2) Definitions.

(A) **Actual emissions**—The actual rate of emissions of a pollutant from a source operation is determined as follows:

1. **Actual emissions** as of a particular date shall equal the average rate, in tons per year, at which the source operation or installation actually emitted the pollutant during the previous two (2)-year period and which represents normal operation. A different time period for averaging may be used if the director determines it to be more representative. Actual emissions shall be calculated using actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period;

2. The director may presume that source-specific allowable

emissions for a source operation or installation are equivalent to the actual emissions of the source operation or installation; and

3. For source operations or installations, which have not begun normal operations on the particular date, actual emissions shall equal the potential emissions of the source operation or installation on that date.

(B) Administrator—The regional administrator for Region VII, EPA.

(C) Affected source—A source that includes one (1) or more emission units subject to emission reduction requirements or limitations under Title IV of the Act.

(D) Affected state—Any state contiguous to the permitting state whose air quality may be affected by the permit, permit modification, or permit renewal; or is within fifty (50) miles of a source subject to permitting under Title V of the Act.

(E) Air pollutant—Agent, or combination of agents, including any physical, chemical, biological, radioactive (including source material, special nuclear material, and by-product material) substance, or matter which is emitted into or otherwise enters the ambient air. Such term includes any precursors to the formation of any air pollutant, to the extent the administrator of the U.S. Environmental Protection Agency, or the administrator's duly authorized representative has identified such precursor(s) for the particular purpose for which the term air pollutant is used.

(F) Allowance—An authorization, allocated to an affected unit by the administrator under Title IV of the Act, to emit, during or after a specified calendar year, one (1) ton of sulfur dioxide (SO₂).

(G) Applicable requirement—All of the following listed in the Act:

1. Any standard or requirement provided for in the implementation plan approved or promulgated by the U.S. Environmental Protection Agency through rulemaking under Title I of the Act that implements the relevant requirements, including any revisions to that plan promulgated in 40 CFR 52;

2. Any term or condition of any preconstruction permit issued pursuant to regulations approved or promulgated through rulemaking under Title I, including part C or D of the Act;

3. Any standard or requirement under section 111 of the Act, including section 111(d);

4. Any standard or requirement under section 112 of the Act, including any requirement concerning accident prevention under section 112(r)(7);

5. Any standard or requirement of the Acid Rain Program under Title IV of the Act or the regulations promulgated under it;

6. Any requirements established pursuant to section 504(b) or section 114(a)(3) of the Act;

7. Any standard or requirement governing solid waste incineration under section 129 of the Act;

8. Any standard or requirement for consumer and commercial products under section 183(e) of the Act;

9. Any standard or requirement for tank vessels under section 183(f) of the Act;

10. Any standard or requirement of the program to control air pollution from outer continental shelf sources under section 328 of the Act;

11. Any standard or requirement of the regulations promulgated to protect stratospheric ozone under Title VI of the Act, unless the administrator has determined that these requirements need not be contained in a Title V permit;

12. Any national ambient air quality standard or increment or visibility requirement under part C of Title I of the Act, but only as it would apply to temporary sources permitted pursuant to section 504(e); and

13. Any standard or requirement established in 643.010–643.190, RSMo, of the Missouri Air Conservation Law and rules adopted under them.

(H) Commence—For the purposes of major stationary source construction or major modification, the owner or operator has all necessary preconstruction approvals or permits and—

1. Began, or caused to begin, a continuous program of actual on-site construction of the source, to be completed within a reasonable time; or

2. Entered into binding agreements or contractual obligations, which cannot be canceled or modified without substantial loss to the owner or operator, to undertake a program of actual construction of the source to be completed within a reasonable time.

(I) Designated representative—A responsible individual authorized by the owner or operator of an affected source and of all affected units at the source, as evidenced by a certificate of representation submitted in accordance with 40 CFR 72, subpart B to represent and legally bind each owner and operator, as a matter of federal law, in matters pertaining to the Acid Rain Program. Whenever the term, responsible official, is used in 40 CFR 70, in this rule, or in any other regulations implementing Title V of the Act, it shall be deemed to refer to the designated representative with regard to all matters under the Acid Rain Program. 40 CFR 72, subpart B promulgated as of July 1, 2017 is hereby incorporated by reference as published by the Office of the Federal Register. Copies can be obtained from the U.S. Publishing Office Bookstore, 710 N. Capitol Street NW, Washington DC 20401. This rule does not incorporate any subsequent amendments or additions.

(J) Draft permit—The version of a permit for which the permitting authority offers public participation or affected state review.

(K) Emissions unit—Any part or activity of an installation that emits or has the potential to emit any regulated air pollutant or any pollutant listed under section 112(b) of the Act. This term is not meant to alter or affect the definition of the term unit for the purposes of Title IV of the Act.

(L) Federally enforceable—All limitations and conditions which are enforceable by the administrator, including those requirements developed pursuant to 40 CFR 55, 60, 61, and 63; requirements within any applicable state implementation plan; requirements in operating permits issued pursuant to 40 CFR 70 or 71, unless specifically designated as nonfederally enforceable; and any permit requirements established pursuant to 40 CFR 52.10, 52.21, or 55, or under regulations approved pursuant to 40 CFR 51, subpart I, including operating permits issued under a U.S. Environmental Protection Agency-approved program that is incorporated into the state implementation plan and expressly requires adherence to any permit issued under such program.

(M) Final permit—The version of a part 70 permit issued by the permitting authority that has completed all review procedures as required in 40 CFR 70.7 and 70.8.

(N) Insignificant activity—An activity or emission unit in which the only applicable requirement would be to list the requirement in an operating permit application under this rule and is either of the following:

1. Emission units whose aggregate emission levels for the installation do not exceed that of the de minimis levels listed in subsection (3)(A) of 10 CSR 10-6.020; or

2. Emission units or activities listed in 10 CSR 10-6.061 as exempt or excluded from construction permit review under 10 CSR 10-6.060.

(O) Intermediate installation—A Part 70 installation with potential emissions that do not exceed major source thresholds by accepting the imposition of voluntarily agreed to federally enforceable limitations on the type of materials combusted or processed, operating rates, hours of operation, or emission rates more stringent than those otherwise required by rule or regulation.

(P) Manure storage and application systems—Any system that

includes but is not limited to lagoons, manure treatment cells, earthen storage ponds, manure storage tanks, manure stockpiles, composting areas, pits and gutters within barns, litter used in bedding systems, all types of land application equipment, and all pipes, hoses, pumps, and other equipment used to transfer manure.

(Q) Maximum achievable control technology (MACT)—The maximum degree of reduction in emissions of the hazardous air pollutants listed in subsection (3)(C) of 10 CSR 10-6.020 (including a prohibition on these emissions where achievable) that the administrator, taking into consideration the cost of achieving emissions reductions and any non-air quality health and environmental impacts and requirements, determines is achievable for new or existing sources in the category or subcategory to which this emission standard applies, through application of measures, processes, methods, systems, or techniques including, but not limited to, measures which—

1. Reduce the volume of or eliminate emissions of pollutants through process changes, substitution of materials, or other modifications;

2. Enclose systems or processes to eliminate emissions;

3. Collect, capture, or treat pollutants when released from a process, stack, storage, or fugitive emissions point;

4. Are design, equipment, work practice, or operational standards (including requirements for operational training or certification); or

5. Are a combination of paragraphs (2)(R)1.-4. of this rule.

[(A)](R) Part 70 installation/s)—An [installation/s] to which the part 70 operating permit requirements of this rule apply, in accordance with the following criteria:

1. [They] Installations that emit or have the potential to emit, in the aggregate, ten (10) tons per year (tpy) or more of any hazardous air pollutant, other than radionuclides, or twenty-five (25) tpy or more of any combination of these hazardous air pollutants or such lesser quantity as the administrator may establish by rule. Notwithstanding the preceding sentence, emissions from any oil or gas exploration or production well (with its associated equipment) and emissions from any pipeline compressor or pump station shall not be aggregated with emissions from other similar units, whether or not these units are in a contiguous area or under common control, to determine whether these units or stations are subject installations. For sources of radionuclides, the criteria shall be established by the administrator;

2. [They] Installations that emit or have the potential to emit one hundred (100) tpy or more of any air pollutant subject to regulation, including all fugitive air pollutants. The fugitive emissions of an installation shall not be considered unless the installation belongs to one (1) of the source categories listed in 10 CSR 10-6.020(3)(B), Table 2. Subject to regulation means, for any air pollutant, that the pollutant is subject to either a provision in the Clean Air Act or a nationally[-] applicable regulation codified by the administrator in 40 CFR 50-99, that requires actual control of the quantity of emissions of that pollutant, and that such a control requirement has taken effect and is operative to control, limit, or restrict the quantity of emissions of that pollutant released from the regulated activity[, except that—];

[A. Greenhouse gases (GHGs), the air pollutant defined as the aggregate group of six (6) greenhouse gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, shall not be subject to regulation unless, as of July 1, 2011, the GHG emissions are at a stationary source emitting or having the potential to emit one hundred thousand (100,000) tpy carbon dioxide (CO₂) equivalent emissions; and

B. The term tpy CO₂ equivalent emissions (CO₂e) shall represent an amount of GHGs emitted and shall be computed by multiplying the mass amount of emissions (tpy), for each of the six (6) greenhouse gases in the pollutant GHGs,

by the gas's associated global warming potential published at Table A-1 of 40 CFR 98, Subpart A, promulgated as of October 30, 2009, and summing the resultant value for each to compute a tpy CO₂e. For purposes of this rule, prior to July 21, 2014, the mass of the greenhouse gas carbon dioxide shall not include carbon dioxide emissions resulting from the combustion or decomposition of non-fossilized and biodegradable organic material originating from plants, animal, or micro-organisms (including products, by-products, residues, and waste from agriculture, forestry, and related industries as well as the non-fossilized and biodegradable organic fractions of industrial and municipal wastes, including gases and liquids recovered from the decomposition of non-fossilized and biodegradable organic material). Table A-1 is hereby incorporated by reference in this rule, as published by the Office of the Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, DC 20408. This rule does not incorporate any subsequent amendments or additions;]

3. [They are] Installations located in nonattainment areas or ozone transport regions[.]—

A. For ozone nonattainment areas, sources with the potential to emit one hundred (100) tpy or more of volatile organic compounds or oxides of nitrogen in areas classified as ["/marginal["] or ["/moderate,["] fifty (50) tpy or more in areas classified as ["/serious,["] twenty-five (25) tpy or more in areas classified as ["/severe,["] and ten (10) tpy or more in areas classified as ["/extreme["]; except that the references in this paragraph to one hundred (100), fifty (50), twenty-five (25), and ten (10) tpy of nitrogen oxides shall not apply with respect to any source for which the administrator has made a finding, under section 182(f)(1) or (2) of the Act, that requirements under section 182(f) of the Act do not apply;

B. For ozone transport regions established pursuant to section 184 of the Act, sources with the potential to emit fifty (50) tpy or more of volatile organic compounds;

C. For carbon monoxide nonattainment areas that are classified as ["/serious,["] and in which stationary sources contribute significantly to carbon monoxide levels as determined under rules issued by the administrator, sources with the potential to emit fifty (50) tpy or more of carbon monoxide; and

D. For particulate matter less than ten (10) micrometers (PM₁₀) nonattainment areas classified as ["/serious,["] sources with the potential to emit seventy (70) tpy or more of PM₁₀;

4. [They] Installations that are affected sources under Title IV of the 1990 Act;

5. [They] Installations that are solid waste incinerators subject to section 129(e) of the Act;

6. [Any i]Installations in a source category designated by the administrator as a part 70 source pursuant to 40 CFR 70.3; and

7. Installations [that would be] are not subject to part 70 source/s strictly due to the following criteria are not subject to part 70 source requirements [until] unless the administrator subjects [this installation] them to [these requirements] part 70 requirements by rule and the installations would be part 70 sources strictly because they are subject to:

A. [They are subject to a]A standard, limitation, or other requirement under section 111 of the Act, including area sources; or

B. [They are subject to a]A standard or other requirement under section 112 of the Act, except that a source, including an area source, is not required to obtain a permit solely because it is subject to rules or requirements under section 112(r) of the Act.

(S) Permanent—Cessation of operation of any air pollution control equipment or process equipment, not to be placed back into service or have a start-up; or terms or conditions that will not change.

(T) Permitting authority—Either the administrator or the state air pollution control agency, local agency, or other agency authorized by the administrator to carry out a permit program as

intended by the Act.

(U) **Regulated air pollutant**—All air pollutants or precursors for which any standard has been promulgated.

(V) **Renewal**—The process by which an operating permit is reissued at the end of its term.

(W) **Responsible official**—Includes one (1) of the following:

1. The president, secretary, treasurer, or vice-president of a corporation in charge of a principal business function, any other person who performs similar policy and decision-making functions for the corporation, or a duly authorized representative of this person if the representative is responsible for the overall operation of one (1) or more manufacturing, production, or operating facilities applying for or subject to a permit and either—

A. The facilities employ more than two hundred fifty (250) persons or have a gross annual sales or expenditures exceeding twenty-five (25) million dollars (in second quarter 1980 dollars); or

B. The delegation of authority to this representative is approved in advance by the permitting authority;

2. A general partner in a partnership or the proprietor in a sole proprietorship;

3. Either a principal executive officer or ranking elected official in a municipality or state, federal, or other public agency. For the purpose of this subparagraph, a principal executive officer of a federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency; or

4. The designated representative of an affected source insofar as actions, standards, requirements, or prohibitions under Title IV of the Act or the regulations promulgated under the Act are concerned and the designated representative for any other purposes under part 70.

(X) **Title I modification**—Any modification that requires a nonattainment, attainment, or unclassified area permit under 10 CSR 10-6.060 or that is subject to any requirement under 10 CSR 10-6.070 or 10 CSR 10-6.080.

[(B)](Y) Definitions of certain terms specified in this rule, other than those defined in this rule section, may be found in 10 CSR 10-6.020.

(3) **Single, Multiple, or General Permits.** Pursuant to this section, an installation must have a permit (or group of permits) addressing all applicable requirements for all emissions units in the installation. An installation may comply with this subsection through any one (1) of the following methods:

[(A)] Pursuant to this section, an installation must have a permit (or group of permits) addressing all applicable requirements for all emissions units in the installation. An installation may comply with this subsection through any one (1) of the following methods:

1. The installation may apply for a single permit covering all emissions units located within a contiguous area under common control (whether or not the installation falls under the same two (2)-digit Standard Industrial Code (SIC));

2. The installation may apply for separate permits for separate emissions units or groups of emissions units; or

3. The installation may apply for coverage for one (1) or more emissions units eligible for permitting under a general permit issued by the permitting authority, and obtain a separate permit(s) for emissions units not eligible for general permit coverage.

4. When determining operating permit classification (part 70, intermediate or basic state), the installation shall calculate the potential to emit for the entire installation and all multiple permits shall be subject to the same operating permit classification.

(B) Notwithstanding, if the installation is a basic installation and is subject to 40 CFR 63, Subpart EEE, National Emission Standard for Hazardous Air Pollutants from Hazardous Waste Combustors, the installation has the option of obtaining a part 70 permit for the entire installation or a part 70 permit for the emission unit subject to the maximum achievable control technology (MACT) and a basic for the rest of the installation. However, the part 70 permit for the affected emission unit must incorporate all applicable requirements that apply to hazardous waste combustion devices, not just those in 40 CFR 63, Subpart EEE.]

(A) The installation may apply for a single permit covering all emissions units located within a contiguous area under common control (whether or not the installation falls under the same two (2)-digit Standard Industrial Code (SIC));

(B) The installation may apply for separate permits for separate emissions units or groups of emissions units; or

(C) The installation may apply for coverage for one (1) or more emissions units eligible for permitting under a general permit issued by the permitting authority, and obtain a separate permit(s) for emissions units not eligible for general permit coverage.

(D) When determining operating permit classification (part 70 or intermediate), the installation shall calculate the potential to emit for the entire installation and all multiple permits shall be subject to the same operating permit classification.

[(4)] **Basic State Operating Permits.**

(A) **Applicability.** All basic state installations are subject to this section.

(B) **Notifications.** The installation shall file a notification with the permitting authority. The following schedules apply:

1. **Initial notifications.** All basic state installations shall file complete operating permit notifications by May 1998;

2. **Subsequent notifications.** Any installation that becomes subject to this section at any time after May 1998 shall file a complete operating permit notification no later than thirty (30) days after commencement of operations;

3. **Renewal notifications.** Installations subject to this section shall file complete operating permit notifications for operating permit renewal at least six (6) months before the date the current operating permit expires;

4. Notwithstanding the deadlines established in this subsection, a complete operating permit notification filed at any time shall be received for processing; and

5. Starting March 30, 2005, all installations that have an active initial or renewal notification—accepted or with a receipt stamp—shall be deemed to be accepted and subject to the respective expiration date on the notification.

(C) **Notifications Review.**

1. After the permitting authority receives an operating permit notification, they shall perform a completeness and applicable requirements verification review and, if the notification is determined to be complete, shall inform the notifier that the operating permit is accepted. The permitting authority will return a copy to the notifier stamped accepted with an expiration date. This copy will be kept at the installation to which the notification pertains.

2. If the permitting authority determines that an operating permit notification is not complete, they shall inform the notifier promptly of the deficiencies in the notification and shall specifically describe required revisions to the operating permit notification.

(D) **Confidential Information.** Operating permit notifiers may make claims of confidentiality pursuant to 10 CSR 10-6.210, for information submitted pursuant to this section.

(E) **Filing Fee.** Each operating permit notification must be accompanied by a one hundred dollar (\$100) filing fee, except for administrative permit amendments as defined in

subparagraph (4)(L)1.A. of this rule. Effective January 1, 2017, each operating permit notification must be accompanied by a five hundred dollar (\$500) filing fee, except for administrative permit amendments as defined in subparagraph (4)(L)1.A. of this rule.

(F) *Certification by Responsible Official.* Operating permit notifications and compliance reports required under this section shall be signed and certified by a responsible official that the information contained in them is true, accurate, and complete based on information and belief formed after reasonable inquiry.

(G) *Notification Contents.* The permitting authority shall prepare and make available to all basic state installations subject to this section an operating permit notification form(s). The operating permit notification form(s) shall require a general description of the installation, all applicable emission limitations and control requirements for each emissions unit at the installation to be permitted and a reference to the respective emission point numbers in the Emission Inventory Questionnaire (EIQ). The notification also shall require a statement of the installation's compliance status with respect to these requirements and a commitment regarding the installation's plans to either attain compliance with these requirements within the time allowed by law or maintain compliance with these requirements during the operating permit period.

(H) *General Permits.* Installations may apply to operate under any applicable general permit.

1. *Issuance of general permits.* General permits covering similar installations may be issued by the permitting authority. Basic installation operating permits are not required to have public participation; however, citizens may appeal any action of the director. The general permit shall indicate a reasonable time after which an installation that has submitted an application for authorization will be deemed to be authorized to operate under the general permit. A general permit shall identify criteria by which installations may be authorized to operate under the general permit. This criteria must include the following:

A. *Categories of sources covered by the general permit must be homogeneous in terms of operations, processes, and emissions;*

B. *Sources may not be subject to case-by-case standards or requirements; and*

C. *Sources must be subject to substantially similar requirements governing operations, emissions, monitoring, reporting, and record keeping.*

2. *Applications.* The permitting authority shall provide application forms for coverage under a general permit. General permit applications may deviate from individual permit applications but shall include all information necessary to determine qualification for, and to assure compliance with, the general permit. The permitting authority shall authorize coverage by the conditions and terms of a general permit to all installations that apply for and qualify under the specified general permit criteria. Installations applying for coverage under a general permit must comply with all the requirements of this rule, except public participation requirements.

3. *Enforcement.* The source shall be subject to enforcement actions for operating without an operating permit if it is determined later that the source does not qualify for the conditions and terms of the general permit, regardless of any application shield provisions.

(I) *Compliance Reporting.* Operating permit notification forms provided by the permitting authority shall include a compliance reporting requirement, which shall require a brief compliance report every five (5) years.

(J) *Operating Permit Period.* Each operating permit under this section shall be effective for a period of five (5) years. The permit term shall commence on the date of acceptance.

(K) *Off-Permit Changes.* Except as provided in paragraph (4)(L)1. of this rule, a basic state permitted installation may make any change in its permitted operations, activities, or emissions that are not addressed in, constrained by, or prohibited by the permit without obtaining a permit revision. Insignificant activities not addressed in or prohibited by the permit, shall not be considered to be constrained by the permit for purposes of the off-permit provisions of this section. Off-permit changes shall be subject to the following requirements and restrictions:

1. *Compliance with applicable requirements.* The change must meet all applicable requirements of the Act and may not violate any existing permit term or condition; no permittee may change a permitted installation without a permit revision, even if the change is not addressed in or constrained by the permit, if this change is subject to any requirements under Title IV of the Act or is a Title I modification;

2. *Contemporaneous notice, except insignificant activities.* The permittee must provide contemporaneous written notice of the change to the permitting authority. This notice shall not be required for changes that are insignificant activities under paragraph (6)(B)3. of this rule. This written notice shall describe each change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change. Construction permit determinations requested of the permitting authority and/or construction permits obtained under 10 CSR 10-6.060 shall be deemed to be contemporaneous notice; and

3. *Records of changes.* The permittee shall keep a record describing all changes made at the installation that result in emissions of a regulated air pollutant subject to an applicable requirement and the emissions resulting from these changes.

(L) *Operating Permit Amendments and Modifications.*

1. *Administrative permit amendments.*

A. *An administrative permit amendment for a basic state permit is a permit revision that—*

(I) *Identifies a change in the name, address, or phone number of any person identified in the permit or provides a similar minor administrative change at the installation; or*

(II) *Allows for change in ownership or operational control of an installation where no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee is submitted to the permitting authority.*

B. *Procedures.*

(I) *The permittee shall request an administrative permit amendment by letter with certification by the responsible official.*

(II) *The permitting authority shall take final action on a request for an administrative permit amendment within sixty (60) days after receipt of the request.*

(III) *The installation may implement the changes addressed in a request for an administrative permit amendment immediately upon submittal of the request.*

2. *Operating permit modifications.* Whenever an operating permit notifier or basic state installation determines, at any time after an operating permit notification has been submitted or an operating permit notification has been accepted by the permitting authority, that the notification or operating permit contains false, misleading, incorrect, or incomplete

information, the owner or operator of the installation shall submit an amendment to the notification or operating permit promptly to the permitting authority. Whenever the permitting authority determines that an operating permit fails to include or inadequately implements any applicable requirement, including any new requirement promulgated after the permitting authority's acceptance of the operating permit, the permitting authority shall inform the installation of this requirement and direct the installation to prepare and submit a notification or operating permit amendment.

(M) *Compliance Demonstrations.* The permitting authority, at any time when an operating permit notification is pending or after an operating permit has been accepted, may require the installation to demonstrate compliance with applicable requirements. If the installation fails to comply with this request, or fails to demonstrate compliance, the installation will be subject to the same enforcement provisions as established under the part 70 state operating permits of section (6) of this rule.

(N) *State Enforcement.* All terms of an operating permit shall be enforceable by the permitting authority. The permitting authority is authorized, for enforcement purposes, to enter and inspect basic state installations at reasonable times and upon the presentation of proper credentials. The owner or operator will provide the representative of the permitting authority the stamped copy of the operating permit notification or general permit upon entry.

(O) *Federal Enforceability.* Any terms of an accepted operating permit which are based on applicable requirements contained in the federally-approved State Implementation Plan (SIP) or any other federal applicable requirements are federally enforceable.

(P) *Operational Flexibility.* Nothing in this section shall be construed to inhibit the operation of a basic state installation with respect to any operations, activities, or emissions not addressed in, constrained by, or prohibited by the operating permit accepted by the permitting authority.

(Q) *Public Availability.* Operating permit notifications, accepted operating permits, and compliance reports under this section shall be maintained in a file available to the public for inspection and copying, except to the extent confidential treatment has been granted at the request of the basic state installation.

(R) *Construction Permits or Authorizations Not Affected.* The requirements of this section shall not affect the obligation of any basic state installation to obtain a permit or authorization for any construction activity at the basic state installation which is subject to 10 CSR 10-6.060 *Construction Permits Required.*

[(5)/(4) Intermediate State Operating Permits.

(A) *Applicability.* All intermediate installations are subject to the requirements of this section.

(B) Permit Notification/Applications.

1. Timely notification/applications.

A. All notifications/applications will be submitted in duplicate. Intermediate installations shall file initial notifications/applications on the following schedule:

[(I) Initial notification. All installations shall file complete notifications by July 1996, with one (1) exception allowed as follows: Intermediate installations that have actual emissions (as defined in 10 CSR 10-6.020(2)(A)4.) less than fifty percent (50%) of the part 70 installation threshold levels (refer to the definition section of this rule for part 70 installation threshold levels) shall file complete notifications by May 1997;]

[(III)/(I) Subsequent application.

[(a) Any installation that becomes subject to this

section at any time between July 1996 and March 2005, shall file a complete application no later than thirty (30) days after the commencement of operations.]

[(b)/(a) Any installation that becomes subject to this section [at any time following March 2005,] shall file a complete application no later than ninety (90) days after the commencement of operations.

[(c)/(b) If an installation already has an issued part 70 operating permit, the installation is subject to the requirements of the part 70 operating permit and intermediate application until the intermediate permit is issued and the part 70 operating permit is terminated;

[(III)/(II) Renewal application. Installations subject to this section shall file complete applications for renewal of the operating permits at least six (6) months before the date of permit expiration. In no event shall this time be greater than eighteen (18) months;

[(IV)/(III) Unified review. An installation subject to this section required to have a construction permit under 10 CSR 10-6.060 may submit a complete application for an operating permit or permit modification for concurrent processing as a unified review. An operating permit submitted for concurrent processing shall be submitted with the applicant's construction permit application, or at a later time as the permitting authority may allow, provided that the total review period does not extend beyond eighteen (18) months. An installation that is required to obtain a construction permit under 10 CSR 10-6.060 and that, in writing, has not chosen to undergo unified review, shall file a complete operating permit application, permit amendment, or modification application separate from the construction permit application within ninety (90) days after commencing operation;

[(V)/(IV) Application/notification expirations. [Starting March 30, 2005—]

(a) Installations that have an active initial or renewal application with a receipt stamp shall—

I. Be deemed to have submitted the initial or renewal application; and

II. Submit a renewal application, as identified in paragraph [(5)/(4)(B)3. of this rule, six to eighteen (6–18) months prior to the expiration date of the permit issued according to subsection [(5)/(4)(E) of this rule;

(b) Installations that have an accepted notification shall submit a renewal application as identified in paragraph [(5)/(4)(B)3. of this rule, six to eighteen (6–18) months prior to the expiration date; and

(c) Installations that have an initial or renewal notification—accepted or with a receipt stamp, but that is expired—shall still submit a renewal application as identified in paragraph [(5)/(4)(B)3. of this rule; and

[(VI)/(V) Notwithstanding the deadlines established in this subsection, a complete initial notification/application filed at any time shall be accepted for processing.

B. Complete application.

(I) The permitting authority shall review each application for completeness and shall inform the applicant within sixty (60) days if the application is not complete. In order to be complete, an application must include a completed application form and, to the extent not called for by the form, the information required in paragraph [(5)/(4)(B)3. of this rule.

(II) If the permitting authority does not notify the installation within sixty (60) days after receipt that its application is not complete, the application shall be deemed complete. However, nothing in this subsection shall prevent the permitting authority from requesting additional information that is reasonably necessary to process the application.

(III) The permitting authority shall maintain a checklist to be used for the completeness determination. A copy of the checklist identifying the application's deficiencies shall be provided to the applicant along with the notice of incompleteness.

(IV) If, while processing an application that has been determined or deemed to be complete, the permitting authority determines that additional information is necessary to evaluate or take final action on that application, the permitting authority may request this additional information be in writing. In requesting this information, the permitting authority shall establish a reasonable deadline for a response.

(V) In submitting an application for renewal of an operating permit, the applicant may identify terms and conditions in the previous permit that should remain unchanged, and may incorporate by reference those portions of the existing permit (and the permit application and any permit amendment or modification applications) that describe products, processes, operations, and emissions to which those terms and conditions apply. The applicant must identify specifically and list which portions of the previous permit or applications, or both, are incorporated by reference. In addition, a permit renewal application must contain—

(a) Information specified in paragraph *[(5)](4)(B)3.* of this rule for those products, processes, operations, and emissions—

I. That are not addressed in the existing permit;

II. That are subject to applicable requirements which are not addressed in the existing permit; or

III. For which the applicant seeks permit terms and conditions that differ from those in the existing permit; and

(b) A compliance plan and certification as required in parts *[(6)](5)(B)3.I.(I)–(IV)* and subparagraph *[(6)](5)(B)3.J.* of this rule.

C. Confidential information. An applicant may make claims of confidentiality pursuant to 10 CSR 10-6.210, for information submitted pursuant to this section. The applicant shall also submit a copy of this information directly to the administrator, if the permitting authority requests that the applicant do so.

D. Filing fee. *[Each operating permit application must be accompanied by a one hundred dollar (\$100) filing fee, except for administrative permit amendments. Effective January 1, 2017, t]*The filing fee is determined using a tiered system based on the complexity of the permit. The total filing fee is the base fee added to the sum of all applicable complexity fee items the facility is subject to at the time the permit application is submitted. This tiered system for calculating the operating permit filing fee applies to initial and renewal applications for permits. To calculate the application filing fee, use the following formula:

Total filing fee = (base fee) + (total additional complexity fee)

Where:

Total filing fee = amount due upon filing of operating permit application, not to exceed six thousand dollars (\$6,000) (regardless of calculated amount).

Base fee = determine using Table 1

Total additional complexity fee = determine using Table 2

Table 1: Base fee

Number of Emission Units	Base Fee
0 to 30	\$ 750
31 to 60	\$1,000
61 to 90	\$1,250
Over 91	\$1,500

Table 2: Worksheet for installation additional complexity fee calculations

Complexity Category	Calculation			
	Number per installation	x	Fee	= Additional complexity fee subtotal
New Source Performance Standard (NSPS)	_____	x	\$1,000	= _____
Maximum Achievable Control Technology (MACT)	_____	x	\$1,500	= _____
National Emissions Standards for Hazardous Air Pollutants (NESHAP)	_____	x	\$1,500	= _____
Compliance Assurance Monitoring (CAM)	_____	x	\$1,000	= _____
Confidentiality Request	_____	x	\$500	= _____
Acid Rain	_____	x	\$500	= _____
Total additional complexity fee				\$ _____

2. Duty to supplement or correct application. Any applicant who fails to submit any relevant facts, or who has submitted incorrect information in a permit application, upon becoming aware of this failure or incorrect submittal, shall promptly submit supplementary facts or corrected information. In addition, an applicant shall provide additional information, as necessary, to address any requirements that become applicable to the installation after the date an application is deemed complete, but prior to issuance or validation of the permit, whichever is later.

3. Standard application form and required information. The permitting authority shall prepare and make available to all intermediate installations subject to this section an operating permit application form(s). The operating permit application form(s) shall require a general description of the installation and the installation's processes and products, emissions-related information, and all applicable emission limitations and control requirements for each emissions unit at the installation to be permitted. The notification also shall require a statement of the installation's compliance status with respect to these requirements and a commitment regarding the installation's plans to either attain compliance with these requirements within the time allowed by law or maintain compliance with these requirements during the operating permit period. An applicant shall submit an application package consisting of the standard application form, emission inventory questionnaire, compliance plan, and compliance certification as identified in subparagraphs *[(6)](5)(B)3.A.–H.*, parts *[(6)](5)(B)3.I.(I)–(IV)* and subparagraph *[(6)](5)(B)3.J.* of this rule.

4. Certification by responsible official. Any application form, report, or compliance certification submitted pursuant to this rule shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, and any other certification, shall be signed by a responsible official and shall contain the following language: "I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete."

5. Single, multiple, or general permits. Pursuant to section *[(5)](4)* of this rule, an installation must have a permit (or group of permits) addressing all applicable requirements for all emission units in the installation. An installation may comply with this subsection through any one (1) of the methods identified in paragraphs *(3)(A)1.–4.J.–(3)(D)* of this rule.

(C) Permit Content.

1. Standard permit requirements. Every operating permit issued pursuant to this section shall contain all requirements applicable to the installation at the time of issuance, as identified in parts *[(6)](5)(C)1.A.(I)* and *[(III)]*, subparagraphs *[(6)](5)(C)1.B.* and *D.*, part *[(6)](5)(C)1.C.(I)*, subpart *[(6)](5)(C)1.C.(II)(a)*, item *[(6)](5)(C)1.C.(II)(b)I.*, subparts *[(6)](5)(C)1.C.(III)(d)* and *(e)*, subparagraphs *[(6)](5)(C)3.A.* through *D.*, and paragraphs *[(6)](5)(C)5.* and *7.* of this rule.

A. General requirements.

(I) The permittee must comply with all the terms and conditions of the permit. Any noncompliance with a permit condition constitutes a violation and is grounds for enforcement action, permit termination, permit revocation and reissuance, permit modification, or denial of a permit renewal application. Note: The grounds for termination of a permit under this part of the rule are the same as the grounds for revocation as stated in part *[(6)](5)(E)8.A.(I)* of this rule.

(II) It shall not be a defense in an enforcement action that it would have been necessary for the permittee to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

(III) The permit may be modified, revoked, reopened, reissued, or terminated for cause. Except as provided for minor permit modifications, the filing of an application or request for a permit modification, revocation and reissuance, or termination, or the filing of a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

(IV) The permit does not convey any property rights of any sort, or grant any exclusive privilege.

(V) The permittee shall furnish to the permitting authority, upon receipt of a written request and within a reasonable time, any information that the permitting authority reasonably may require to determine whether cause exists for modifying, reopening, reissuing, or revoking the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the permitting authority copies of records required to be kept by the permittee. The permittee may make a claim of confidentiality for any information or records submitted under this paragraph of this rule.

(VI) Failure to comply with the limitations and conditions that qualify the installation for an intermediate permit make the installation subject to the provisions of section *[(6)](5)* of this rule and enforcement action for operating without a valid part 70 operating permit.

B. Reporting requirements. With respect to reporting, the permit shall incorporate all applicable reporting requirements and require the following:

(I) The frequency the permittee shall submit a report of any required monitoring. To the extent possible, the schedule for submission of these reports shall be timed to coincide with other periodic reports required of the permittee;

(II) Each report submitted under part *[(5)](4)(C)1.B.(I)* of this rule shall identify any deviations from permit requirement, since the previous report, that have been monitored by the monitoring systems required under the permit, and any deviations from the monitoring, record-keeping, and reporting requirements of the permit;

(III) In addition to annual monitoring reports, each permittee shall be required to submit supplemental reports as indicated in subpart *[(6)](5)(C)1.C.(III)(c)* of this rule. All reports of deviations shall identify the cause or probable cause of the deviations and any corrective actions or preventative measures taken and follow the procedures identified in subpart *[(6)](5)(C)1.C.(III)(c)* of this rule.

C. Reasonably anticipated operating scenarios. The permit shall include terms and conditions for reasonably anticipated operating scenarios identified by the applicant and approved by the permitting authority. The permit shall authorize the permittee to make changes among alternative operating scenarios authorized in the permit without notice, but shall require the permittee, contemporaneous with changing from one (1) operating scenario to another, to record

in a log at the permitted installation the scenario under which it is operating.

2. Federally-enforceable conditions. Any voluntary provisions issued under this section of the rule, designed to limit an installation's potential to emit, shall be designated federally-enforceable by the permitting authority. Any terms and conditions so designated are required to—

A. Be at least as stringent as any other applicable limitations and requirements contained in the implementation plan or enforceable under the implementation plan. The permitting authority may not waive or make less stringent any limitations or requirements contained in the implementation plan, or that are otherwise federally-enforceable (for example, standards established under sections 111 or 112 of the Act) in the operating permit;

B. Be permanent, quantifiable, and otherwise enforceable as a practical matter; and

C. Follow the public participation procedures of section *[(7)](6)* of this rule.

3. Compliance certification. The permit must include requirements for certification of compliance with terms and conditions contained in the permit that are federally enforceable, including emissions limitations, standards, or work practices. The permit shall specify the information identified in subparts *[(6)](5)(C)3.E.(I)–(III)* and *(V)–(VI)* of this rule.

4. General permits. Installations may apply to operate under any general permit.

A. Issuance of general permits. General permits covering similar installations may be issued by the permitting authority after notice and opportunity for public participation under section *[(7)](6)*. The general permit shall indicate a reasonable time after which an installation that has submitted an application for authorization will be deemed to be authorized to operate under the general permit. A general permit shall identify criteria by which installations may be authorized to operate under the general permit. This criteria must include the following:

(I) Categories of sources covered by the general permit must be homogeneous in terms of operations, processes, and emissions;

(II) Sources may not be subject to case-by-case standards or requirements; and

(III) Sources must be subject to substantially similar requirements governing operations, emissions, monitoring, reporting, and record keeping.

B. Applications. The permitting authority shall provide application forms for coverage under a general permit. General permit applications may deviate from individual permit applications but shall include all information necessary to determine qualification for, and to assure compliance with, the general permit. The permitting authority shall authorize coverage by the conditions and terms of a general permit to all installations that apply for and qualify under the specified general permit criteria. Installations applying for coverage under a general permit must comply with all the requirements of this rule, except public participation requirements.

C. Public participation. Although public participation under section *[(7)](6)* of this rule is necessary for the issuance of a general permit, the permitting authority may authorize an installation to operate under general permit terms and conditions without repeating the public participation procedures.

D. Enforcement. The source shall be subject to enforcement actions for operating without an operating permit if it is determined later that the source does not qualify for the conditions and terms of the general permit.

5. Off-permit changes. Except as provided in subparagraph *[(5)](4)(C)5.A.* of this rule, an intermediate permitted installation may make any change in its permitted installation's operations, activities, or emissions that is not addressed in, constrained by, or prohibited by the permit without obtaining a permit revision. Off-permit changes shall be subject to the following requirements and restrictions:

A. Compliance with applicable requirements. The change must meet all applicable requirements of the Act and may not violate any existing permit term or condition; no permittee may change a permitted installation without a permit revision, even if the change is not addressed in or constrained by, the permit, if this change is a Title I modification. Please Note: Changes at the installation which affect the emission limitation(s) classifying the installation as an intermediate source (add additional equipment to the record keeping requirements, increase the emissions above major source level) do not qualify for off-permit changes;

B. Contemporaneous notice. The permittee must provide contemporaneous written notice of the change to the permitting authority and to the administrator. This written notice shall describe each change, including the date, any change in emissions, pollutants emitted and any applicable requirement that would apply as a result of the change; and

C. Record of changes. The permittee shall keep a record describing all changes made at the installation that result in emissions of a regulated air pollutant subject to an applicable requirement and the emissions resulting from these changes.

6. Federal enforceability. Any terms of an issued operating permit which are based on applicable requirements contained in the federally-approved State Implementation Plan (SIP) or any other applicable federal requirements are federally enforceable.

(D) Unified Review. The installation shall submit the operating permit application and the unified review shall follow the procedures identified in subsection *[(6)](5)(D)* of this rule.

(E) Permit Issuance, Renewal, Reopenings, and Revisions. The complete intermediate operating permit, permit modification, or permit renewal applications and permits shall be subject to the criteria identified in paragraphs *[(6)](5)(E)4.* and *8.-11.* of this rule.

1. Action on application.

A. The intermediate operating permit, permit modification, or permit renewal applications shall follow the procedures identified in subparagraphs *[(6)](5)(E)1.A.-C.* and *G.* of this rule.

B. Except as provided in this subsection of the rule, the permitting authority shall take final action on each application for an intermediate operating permit within eighteen (18) months after receiving a complete application. Final action on each application for a significant permit modification or permit renewal shall be taken within six (6) months after receipt of a complete application. For renewals, the installation shall remain subject to the conditions of the current permit until the renewal permit is issued. New sources are subject to section *[(6)] (5)* of this rule until an intermediate permit is issued, even if the permitting authority does not act within the time frames specified in this rule. For each application the permitting authority shall submit a draft permit for public participation under section *[(7)] (6)* of this rule no later than thirty (30) days before the deadline for final action established in this section.

C. Following the end of the public comment period, the permitting authority shall issue or deny the permit, permit modification, or permit renewal.

2. Permit renewal and expiration.

A. Renewal application requirements. Applications for permit renewals shall be subject to the same procedural requirements, including public participation and affected state comment, that apply to initial permit issuance. The permitting authority, in issuing a permit or renewal permit, may identify those portions that are proposed to be revised, supplemented, or deleted.

B. Timely application. An installation's right to operate shall terminate upon the expiration of the permit, unless a complete permit renewal application is submitted at least six (6) months before the date of expiration, or unless the permitting authority takes final action approving an application for a permit renewal by the expiration date.

C. Extension of expired permits. If a timely and complete application for a permit renewal is submitted, but the permitting authority fails to take final action to issue or deny the renewal permit

before the end of the term of the previous permit, the previous permit shall not expire until the renewal permit is issued or denied.

3. Operating permit amendments/modifications.

A. Administrative permit amendments are defined and shall follow the procedures identified in subparagraphs *[(6)](5)(E)4.A.* and *C.* of this rule.

B. Permit modifications are defined as any revision to an intermediate operating permit which is not an administrative permit amendment under subparagraph *[(5)](4)(E)2.A.* of this rule. An applicant for a permit modification shall adhere to all the relevant requirements for an initial permit application under section *[(5)] (4)* of this rule, as well as requirements for public participation under section *[(7)] (6)* of this rule, except—

(I) The applicant should use the form for a permit modification application, rather than the form for an initial permit issuance; and

(II) The permitting authority will complete review of the permit modification applications within nine (9) months after receipt of a complete application.

4. Reopening permits for cause.

A. Cause to reopen. An intermediate operating permit shall be reopened for cause if:—

(I) The permitting authority determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions limitations standards or other terms of the permit;

(II) Additional applicable requirements under the Act become applicable to the installation; however, reopening on this ground is not required as identified in subparts *[(6)](5)(E)6.A.(III)(a)-(c)* of this rule; or

(III) The permitting authority or the administrator determines that the permit must be reopened and revised to assure compliance with applicable requirements.

B. The notices, procedures for issuance, and deadlines will follow the criteria in subparagraphs *[(6)](5)(E)6.B.-D.* and *F.* of this rule.

(F) Permit Review by the Administrator and Affected States.

1. Notice of draft actions. The permitting authority will give notice of each draft permit, modified permit, and renewed permit to the administrator and any affected state on, or before, the time that the permitting authority provides notice to the public, except in the case of minor permit modifications. The administrator and affected states may comment on the draft permit action during the period allowed for public comment, as shall be set forth in a notice to the administrator and affected states.

2. Written response to comments. The permitting authority will provide a written response to the public comments received from the administrator and affected states to the installation and all other parties which submitted comments during the public comment period as described in section *[(7)] (6)* of this rule prior to issuing the operating permit.

[(6)](5) Part 70 Operating Permits.

(A) Applicability. All part 70 installations are subject to this section.

(B) Permit Applications.

1. Duty to apply.

A. Timely application.

[(II) Part 70 installations shall file initial applications on the following schedule:

(a) The permit registry.

1. The permitting authority shall create and maintain a permit issuance registry that part 70 installations may apply in writing to be placed on. The request must identify a specific year of initial issuance. The registry will identify by year when the permitting authority expects to issue the operating permit.

II. The registry will be opened for three (3)

months after the effective date of this rule. The registry will be filled on a first-come, first-served basis, judged by the stamped "Received" date by the permitting authority.

III. The permitting authority will assign installations that do not make a specific request to the registry at the permitting authority's discretion as necessary to meet a one-third (1/3) per year for three (3) years permit issuance schedule following the administrator's approval of the operating permit program.

IV. The permitting authority may exercise discretion in reassigning applicants on the registry by accepting applicants after the close of the registry, and taking into consideration staff resources, complexity of applicant's operations, distribution of multiple installations under common control, and amount and nature of the air contaminants; and (b) Initial application submittal schedule.

I. Installations scheduled to receive their operating permit within the first year of the registry shall file complete applications by July 1996.

II. All other installations shall file complete applications by May 1996.

(III) Any installation that becomes subject to this section after May 9, 1994, shall file a complete application no later than twelve (12) months following either the administrator's approval of the operating permit program or the commencement of operations, whichever is later.]

[(III)](I) A complete initial application filed at any time shall be accepted for processing. However, acceptance of an application does not relieve the applicant of his/her liability for submitting an untimely application.

[(IV)](II) An installation subject to this section required to meet section 112(g) of the Act, or to have a construction permit under 10 CSR 10-6.060 may submit a complete application for an operating permit or permit modification for concurrent processing as a unified review. An operating permit application submitted for concurrent processing shall be submitted with the applicant's construction permit application, or at a later time as the permitting authority may allow, provided that the total review period does not extend beyond eighteen (18) months. An installation that is required to obtain a construction permit under 10 CSR 10-6.060 and who, in writing, has not chosen to undergo unified review, shall file a complete operating permit application, permit amendment, or modification application separate from the construction permit application within twelve (12) months after commencing operation.

[(V)](III) Installations subject to this section shall file complete applications for renewal of the operating permits at least six (6) months before the date of permit expiration. In no event shall this time be greater than eighteen (18) months.

[(VI) Installations subject to this section required to submit applications for initial phase II acid rain permits shall submit complete applications to the permitting authority by January 1, 1996, for sulfur dioxide, and by January 1, 1998 for nitrogen oxides.]

B. Complete application.

(I) The permitting authority shall review each application for completeness and shall inform the applicant within sixty (60) days if the application is not complete. In order to be complete, an application must include a completed application form and, to the extent not called for by the form, the information required in paragraph [(6)](5)(B)3. of this rule.

(II) If the permitting authority does not notify the installation within sixty (60) days after receipt that its application is not complete, the application shall be deemed complete. However, nothing in this subsection shall prevent the permitting authority from requesting additional information that is reasonably necessary to process the application.

(III) The permitting authority shall maintain a checklist to be used for the completeness determination. A copy of the checklist

identifying the application's deficiencies shall be provided to the applicant along with the notice of incompleteness.

(IV) If, while processing an application that has been determined or deemed to be complete, the permitting authority determines that additional information is necessary to evaluate or take final action on that application, the permitting authority may request this additional information be in writing. In requesting this information, the permitting authority shall establish a reasonable deadline for a response.

(V) In submitting an application for renewal of an operating permit, the applicant may identify terms and conditions in the previous permit that should remain unchanged, and may incorporate by reference those portions of the existing permit (and the permit application and any permit amendment or modification applications) that describe products, processes, operations, and emissions to which those terms and conditions apply. The applicant must identify specifically and list which portions of the previous permit or applications, or both, are incorporated by reference. In addition, a permit renewal application must contain—

(a) Information specified in paragraph [(6)](5)(B)3. of this rule for those products, processes, operations, and emissions—

I. That are not addressed in the existing permit;

II. That are subject to applicable requirements which are not addressed in the existing permit; or

III. For which the applicant seeks permit terms and conditions that differ from those in the existing permit; and

(b) A compliance plan and certification as required in subparagraphs [(6)](5)(B)3.I. and J. of this rule.

C. Confidential information. If an applicant submits information to the permitting authority under a claim of confidentiality pursuant to 10 CSR 10-6.210, the applicant shall also submit a copy of this information directly to the administrator, if the permitting authority requests that the applicant do so.

D. Filing fee. *[Each application must be accompanied by a one hundred dollar (\$100) filing fee. Effective January 1, 2017, t]*The filing fee is determined using a tiered system based on the complexity of the permit. The total filing fee is the base fee added to the sum of all applicable complexity fee items the facility is subject to at the time the permit application is submitted. This tiered system for calculating the operating permit filing fee applies to initial and renewal applications for permits. To calculate the application filing fee, use the following formula:

Total filing fee = (base fee) + (total additional complexity fee)

Where:

Total filing fee = amount due upon filing of operating permit application, not to exceed six thousand dollars (\$6,000) (regardless of calculated amount).

Base fee = determine using Table 1

Total additional complexity fee = determine using Table 2

Table 1: Base fee

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0 to 30	\$ 750
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Table 2: Worksheet for installation additional complexity fee calculations

Complexity Category	Calculation			
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Compliance Assurance Monitoring (CAM)	_____	x	\$1,000	= _____
Confidentiality Request	_____	x	\$500	= _____
Acid Rain	_____	x	\$500	= _____
Total additional complexity fee				\$ _____

2. Duty to supplement or correct application. Any applicant who fails to submit any relevant facts, or who has submitted incorrect information in a permit application, upon becoming aware of this failure or incorrect submittal, shall promptly submit supplementary facts or corrected information. In addition, an applicant shall provide additional information, as necessary, to address any requirements that become applicable to the installation after the date an application is deemed complete, but prior to issuance or validation of the permit, whichever is later.

3. Standard application form and required information. An applicant shall submit an application package consisting of the standard application form, emission inventory questionnaire, compliance plan, and compliance certification. The application package must include all information needed to determine applicable requirements. The application must include information needed to determine the applicability of any applicable requirement. The applicant shall submit the information called for by the application form for each emissions unit at the installation to be permitted, except for insignificant activities. An activity cannot be listed as insignificant if the activity has an applicable requirement. The installation shall provide a list of any insignificant activities that are exempt because of size or production rate. Any insignificant activity required to be listed in the application also must list the approximate number of activities included (for example, twenty (20) leaky valves) and the estimated quantity of emissions associated. The application must include any other information, as requested by the permitting authority, to determine the insignificant activities have no applicable requirements. Information reported in the permit application which does not result in the specification of any permit limitation, term, or condition with respect to that information (including, but not limited to, information identifying insignificant activities), shall not in any way constrain the operations, activities, or emissions of a permitted installation, except as otherwise provided in this section. The standard application form (and any attachments) shall require that the following information be provided:

A. Identifying information. The applicant's company name and address (or plant name and address if different from the company name), the owner's name and state registered agent, and the telephone number and name of the plant site manager or other contact person;

B. Processes and products. A description of the installation's

processes and products (by two (2)-digit Standard Industrial Classification Code (SIC)), including those associated with any reasonably anticipated operating scenarios identified by the applicant;

C. Emissions-related information. The following emissions-related information on the emissions inventory forms:

(I) All emissions of pollutants for which the installation is a part 70 source, and all emissions of any other regulated air pollutants. The permit application shall describe all emissions of regulated air pollutants emitted from each emissions unit, except as provided for by section [[6]](5) of this rule. The installation shall submit additional information related to the emissions of air pollutants sufficient to verify which requirements are applicable to the installation;

(II) Identification and description of all emissions units whose emissions are included in part [[6]](5)(B)3.C.(I) of this rule, in sufficient detail to establish the applicability of any and all requirements;

(III) Emissions rates in tons per year and in such terms as are necessary to establish compliance consistent with the applicable standard reference test method, if any;

(IV) The following information to the extent needed to determine or regulate emissions including: fuels, fuel use, raw materials, production rates, and operating schedules;

(V) Identification and description of air pollution control equipment;

(VI) Identification and description of compliance monitoring devices or activities;

(VII) Limitations on installation operations affecting emissions or any work practice standards, where applicable, for all regulated air pollutants;

(VIII) Other information required by any applicable requirement (including information related to stack height credit limitations developed pursuant to section 123 of the Act); and

(IX) Calculations on which the information in parts [[6]](5)(B)3.C.(I)-(VIII) of this rule is based;

D. Air pollution control information. The following air pollution control information:

(I) Citation and description of all applicable requirements; and

(II) Description of, or reference to, any applicable test method for determining compliance with each applicable requirement;

E. Applicable requirements information. Other specific information required under the permitting authority's regulations to implement and enforce other applicable requirements of the Act or of these rules, or to determine the applicability of these requirements;

F. Alternative emissions limits. If the SIP allows an installation to comply through an alternative emissions limit or means of compliance, the applicant may request that such an alternative limit or means of compliance be specified in the permit. The applicant must demonstrate that any such alternative is quantifiable, accountable, enforceable, and based on replicable procedures. The applicant shall propose permit terms and conditions to satisfy these requirements in the application;

G. Proposed exemptions. An explanation of any proposed exemptions from otherwise applicable requirements;

H. Proposed reasonably anticipated operating scenarios. Additional information, as determined necessary by the permitting authority, to define reasonably anticipated operating scenarios identified by the applicant for emissions trading or to define permit terms and conditions implementing operational flexibility;

I. Compliance plan. A compliance plan that contains all of the following:

(I) A description of the compliance status of the installation with respect to all applicable requirements;

(II) A description as follows:

(a) For applicable requirements with which the installation is in compliance, a statement that the installation will continue to comply with these requirements;

(b) For applicable requirements that will become effective during the permit term, a statement that the installation will comply with these requirements on a timely basis; and

(c) For any applicable requirements with which the installation is not in compliance at the time of permit issuance, a narrative description of how the installation will achieve compliance with these requirements;

(III) A compliance schedule as follows:

(a) For applicable requirements with which the installation is in compliance, a statement that the installation will continue to comply with these requirements;

(b) For applicable requirements that will become effective during the permit term, a statement that the installation will comply with these requirements on a timely basis. A statement that the installation will comply in a timely manner with applicable requirements that become effective during the permit term shall satisfy this provision, unless a more detailed schedule is expressly required by the applicable requirement; and

(c) A schedule of compliance for all applicable requirements with which the installation is not in compliance at the time of permit issuance, including a schedule of remedial measures and an enforceable sequence of actions, with milestones, leading to compliance. (This compliance schedule shall resemble and be equivalent in stringency to that contained in any judicial consent decree or administrative order to which the installation is subject);

(IV) For installations required to have a schedule of compliance under subpart *[(6)](5)(B)3.I.(III)(c)* of this rule, a schedule for the submission of certified progress reports no less frequently than every six (6) months; and

(V) The compliance plan content requirements specified in this paragraph shall apply to, and be included in, the acid rain portion of a compliance plan for an affected source, except as specifically superseded by regulations promulgated under Title IV of the Act with regard to the schedule and method(s) the installation will use to achieve compliance with the acid rain emissions limitations;

J. Compliance certification and information.

(I) A certification of compliance with all applicable requirements signed by a responsible official consistent with paragraph *[(6)](5)(B)4.* of this rule and section 114(a)(3) of the Act;

(II) A statement of methods used for determining compliance, including a description of monitoring, record keeping and reporting requirements, and test methods;

(III) A schedule for the submission of compliance certifications during the permit term, which shall be submitted annually, or more frequently if required by an underlying applicable requirement; and

(IV) A statement indicating the installation's compliance status with respect to any applicable enhanced monitoring and compliance certification requirements of the Act; and

K. Acid rain information. Nationally-standardized forms for acid rain portions of permit applications and compliance plans shall be used, as required by rules promulgated under Title IV of the Act.

4. Certification by responsible official. Any application form, report, or compliance certification submitted pursuant to this rule shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, and any other certification, shall be signed by a responsible official and shall contain the following language: "I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete."

5. Single, multiple, or general permits. Pursuant to this section of the rule, an installation must have a permit (or group of permits) addressing all applicable requirements for all emissions units in the installation. An installation may comply with this subsection of the rule through any one (1) of the methods identified in paragraphs (3)(A)/1.-4./-(3)(D) of this rule.

(C) Permit Content.

1. Standard permit requirements. Every operating permit issued

pursuant to this section *[(6)] (5)* shall contain all requirements applicable to the installation at the time of issuance.

A. Emissions limitations and standards. The permit shall specify emissions limitations or standards applicable to the installation and shall include those operational requirements or limitations as necessary to assure compliance with all applicable requirements.

(I) The permit shall specify and reference the origin of and authority for each term or condition and shall identify any difference in form as compared to the applicable requirement upon which the term or condition is based.

(II) The permit shall state that, where an applicable requirement is more stringent than an applicable requirement of rules promulgated under Title IV of the Act, both provisions shall be incorporated into the permit and shall be enforceable by the administrator.

(III) If the implementation plan or other applicable requirement allows an installation to comply through an alternative emissions limit or means of compliance and the applicant requests that this alternative limit or means of compliance be specified in the permit, the permitting authority may include this alternative emissions limit or means of compliance in an installation's permit upon demonstrating that it is quantifiable, accountable, enforceable, and based on replicable procedures.

B. Permit duration. The permitting authority shall issue permits for five (5) years. The permit term shall commence on the date of issuance or, when applicable, the date of validation.

C. Monitoring and related record-keeping and reporting requirements.

(I) The permit shall contain the following requirements with respect to monitoring:

(a) All emissions monitoring and analysis procedures or test methods required under the applicable requirements, including any procedures and methods promulgated by the administrator pursuant to sections 114(a)(3) or 504(b) of the Act;

(b) Where the applicable requirement does not require periodic testing or instrumental or noninstrumental monitoring (which may consist of record keeping designed to serve as monitoring), then periodic monitoring sufficient to yield reliable data for the relevant time period that are representative of the installation's compliance with the permit, as reported pursuant to part *[(6)](5)(C)1.C.(III)* of this rule. These monitoring requirements shall assure the use of terms, test methods, units, averaging periods, and other statistical conventions consistent with the applicable requirement. Record-keeping provisions may be sufficient to meet the requirements of this paragraph; and

(c) As necessary, requirements concerning the use, maintenance, and where appropriate, installation of monitoring equipment or methods.

(II) With respect to record keeping, the permit shall incorporate all applicable record-keeping requirements and require, where applicable, the following:

(a) Records of required monitoring information that include the following:

I. The date, place as defined in the permit, and time of sampling or measurements;

II. The date(s) analyses were performed;

III. The company or entity that performed the analyses;

IV. The analytical techniques or methods used;

V. The results of these analyses; and

VI. The operating conditions as existing at the time of sampling or measurement;

(b) Retention of records.

I. Retention of records of all required monitoring data and support information for a period of at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings when used for continuous

monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, the permit may specify that records may be maintained in computerized form.

II. Affected sources under Title IV of the Act will have a three (3)-year monitoring data record retention period as required in 40 CFR 75.

(III) With respect to reporting, the permit shall incorporate all applicable reporting requirements and require the following:

(a) A permit issued under these rules shall require the permittee to submit a report of any required monitoring every six (6) months. To the extent possible, the schedule for submission of these reports shall be timed to coincide with other periodic reports required by the permit, including the permittee's annual compliance certification;

(b) Each report submitted under subpart *[(6)](5)(C)1.C.(III)(a)* of this rule shall identify any deviations from permit requirement, since the previous report, that have been monitored by the monitoring systems required under the permit, and any deviations from the monitoring, record-keeping, and reporting requirements of the permit;

(c) In addition to semiannual monitoring reports, each permittee shall be required to submit supplemental reports as indicated here. All reports of deviations shall identify the cause or probable cause of the deviations and any corrective actions or preventative measures taken.

I. Notice of any deviation resulting from an emergency (or upset) condition as defined in paragraph *[(6)](5)(C)7.* of this rule shall be submitted to the permitting authority either verbally or in writing within two (2) working days after the date on which the emission limitation is exceeded due to the emergency, if the permittee wishes to assert an affirmative defense. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that indicate an emergency occurred and the permittee can identify the cause(s) of the emergency. The permitted facility must show that it was operated properly at the time and that during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or requirements in the permit. The notice must contain a description of the emergency, steps taken to mitigate emissions, and the corrective actions taken.

II. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported as soon as practicable.

III. Any other deviations identified in the permit as requiring more frequent reporting than the permittee's semiannual report shall be reported on the schedule specified in the permit;

(d) Every report submitted shall be certified by a responsible official, except that, if a report of a deviation must be submitted within ten (10) days after the deviation, the report may be submitted without a certification if the report is resubmitted with an appropriate certification within ten (10) days after that, together with any corrected or supplemental information required concerning the deviation; and

(e) A permittee may request confidential treatment of information submitted in any report of deviation.

D. Risk management plans. If the installation is required to develop and register a risk management plan pursuant to section 112(r) of the Act, the permit is required to specify only that the permittee will verify that they have complied with the requirement to register such a plan. The contents of the risk management plan itself need not be incorporated as a permit term.

E. Emissions exceeding Title IV allowances. Where applicable, the permit shall prohibit emissions exceeding any allowances that the installation lawfully holds under Title IV of the Act or rules promulgated thereunder.

(I) No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid rain program if the increases do not require a permit revision

under any other applicable requirement.

(II) No limit shall be placed on the number of allowances that may be held by an installation. The installation may not use these allowances, however, as a defense for noncompliance with any other applicable requirement.

(III) Any of these allowances shall be accounted for according to procedures established in rules promulgated under Title IV of the Act.

F. Severability clause. The permit shall include a severability clause to ensure the continued validity of uncontested permit conditions in the event of a successful challenge to any contested portion of the permit.

G. General requirements.

(I) The permittee must comply with all the terms and conditions of the permit. Any noncompliance with a permit condition constitutes a violation and is grounds for enforcement action, for permit termination, permit revocation and reissuance, permit modification, or denial of a permit renewal application. Note: The grounds for termination of a permit under part *[(6)](5)(C)1.G.(I)* are the same as the grounds for revocation as stated in part *[(6)](5)(E)8.A.(I)*.

(II) It shall not be a defense in an enforcement action that it would have been necessary for the permittee to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

(III) The permit may be modified, revoked, reopened, reissued, or terminated for cause. Except as provided for minor permit modifications, the filing of an application or request for a permit modification, revocation and reissuance, or termination, or the filing of a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

(IV) The permit does not convey any property rights of any sort, or grant any exclusive privilege.

(V) The permittee shall furnish to the permitting authority, upon receipt of a written request and within a reasonable time, any information that the permitting authority reasonably may require to determine whether cause exists for modifying, reopening, reissuing, or revoking the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the permitting authority copies of records required to be kept by the permittee. The permittee may make a claim of confidentiality for any information or records submitted under this paragraph *[(6)](5)(C)1.*

H. Incentive programs not requiring permit revisions. The permit shall include a provision stating that no permit revision will be required for any installation changes made under any approved economic incentive, marketable permit, emissions trading, or other similar programs or processes provided for in the permit.

I. Reasonably anticipated operating scenarios. The permit shall include terms and conditions for reasonably anticipated operating scenarios identified by the applicant and approved by the permitting authority. The permit shall authorize the permittee to make changes among alternative operating scenarios authorized in the permit without notice, but shall require the permittee, contemporaneous with changing from one (1) operating scenario to another, to record in a log at the permitted installation the scenario under which it is operating. The permit shield shall apply to these terms and conditions.

J. Emissions trading. The permit shall include terms and conditions for the trading of emissions increases and decreases within the permitted installation to the extent that the applicable requirements provide for the trading of increases and decreases without case-by-case approval of each emissions trade. These terms and conditions shall include all those required to determine compliance (to include contemporaneous recording in a log of the details of the trade) and must meet all applicable requirements, and requirements of this rule. The permit shield shall apply to all terms and conditions that allow the trading of these increases and decreases in emissions.

2. Federally-enforceable conditions and state-only requirements.

A. Federally-enforceable conditions. Except as provided in subparagraph */(6)/(5)(C)2.B.* of this rule, all terms and conditions in a permit issued under this section, including any voluntary provisions designed to limit an installation's potential to emit, are enforceable by the permitting authority, by the administrator, and by citizens under section 304 of the Act.

B. State-only requirements. Notwithstanding subparagraph */(6)/(5)(C)2.A.* of this rule, the permitting authority shall expressly designate as not being federally-enforceable or enforceable under section 304 of the Act any terms and conditions included in the permit that are not required under the Act or any of its applicable requirements, and these terms and conditions shall not be enforceable by the administrator or by citizens under section 304 of the Act. Terms and conditions so designated *[shall]* are not *[be]* subject to the requirements of 40 CFR sections 70.7 and 70.8. Terms and conditions expressly designated as state-only requirements under this paragraph may be included in an addendum to the installation's permit.

3. Compliance requirements. Permits issued under this section */(6)/(5)* shall contain the elements listed here with respect to compliance.

A. General requirements, including certification. Consistent with the monitoring and related record-keeping and reporting requirements of this paragraph, the operating permit must include compliance certification, testing, monitoring, reporting, and record-keeping requirements sufficient to assure compliance with the terms and conditions of the permit. Any document (including reports) required to be submitted under this rule shall contain a certification signed by a responsible official as to the results of the required monitoring.

B. Inspection and entry. The permit must include requirements providing that, upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized officials of the permitting authority to perform the following (subject to the permittee's right to seek confidential treatment of information submitted to, or obtained by, the permitting authority under this subsection):

(I) Enter upon the permittee's premises where a permitted installation is located or an emissions-related activity is conducted, or where records must be kept under the conditions of the permit;

(II) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

(III) Inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and

(IV) As authorized by the Missouri Air Conservation Law Chapter 643, RSMo, or the Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

C. Schedule of compliance. The permit must include a schedule of compliance, to the extent required.

D. Progress reports. To the extent required under an applicable schedule of compliance, the permit must require progress reports to be submitted semiannually, or more frequently if specified in the applicable requirement or by the permitting authority. These progress reports shall contain the following:

(I) Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when these activities, milestones, or compliance were achieved; and

(II) An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

E. Compliance certification. The permit must include requirements for certification of compliance with terms and conditions contained in the permit that are federally enforceable, including emissions limitations, standards, or work practices. The permit shall specify—

(I) The frequency (which shall be annually unless the applicable requirement specifies submission more frequently) of compliance certifications;

(II) The means for monitoring compliance with emissions limitations, standards, and work practices contained in applicable requirements;

(III) A requirement that the compliance certification include the following:

(a) The identification of each term or condition of the permit that is the basis of the certification;

(b) The permittee's current compliance status, as shown by monitoring data and other information reasonably available to the permittee;

(c) Whether compliance was continuous or intermittent;

(d) The method(s) used for determining the compliance status of the installation, currently and over the reporting period; and

(e) Such other facts as the permitting authority may require to determine the compliance status of the source;

(IV) A requirement that all compliance certifications be submitted to the administrator as well as to the permitting authority;

(V) Additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act; and

(VI) Any other provisions as the permitting authority may require.

4. General permits. Installations may apply to operate under any general permit.

A. Issuance of general permits. General permits covering similar part 70 installations may be issued by the permitting authority after notice and opportunity for public participation under subsection */(6)/(5)(F)* and section */(7)/(6)*. The general permit shall indicate a reasonable time after which an installation that has submitted an application for authorization will be deemed to be authorized to operate under the general permit. A general permit shall identify criteria by which installations may be authorized to operate under the general permit. This criteria *[must]* includes the following:

(I) Categories of sources covered by the general permit must be homogeneous in terms of operations, processes, and emissions;

(II) Sources may not be subject to case-by-case standards or requirements; and

(III) Sources must be subject to substantially similar requirements governing operations, emissions, monitoring, reporting, and record keeping.

B. Applications. The permitting authority shall provide application forms for coverage under a general permit. General permit applications may deviate from individual part 70 permit applications but shall include all information necessary to determine qualification for, and to assure compliance with, the general permit. The permitting authority shall authorize coverage by the conditions and terms of a general permit to all installations that apply for and qualify under the specified general permit criteria. Installations applying for coverage under a general permit must comply with all the requirements of this rule, except public participation requirements. General permits shall not be authorized for affected sources under the acid rain program unless otherwise provided in rule promulgated under Title IV of the Act.

C. Public participation. Although public participation under section */(7)/(6)* of this rule is necessary for the issuance of a general permit, the permitting authority may authorize an installation to operate under general permit terms and conditions without repeating the public participation procedures. However, this authorization shall not be a final permit action of purposes for judicial review.

D. Enforcement. Notwithstanding the permit shield provisions of paragraph */(6)/(5)(C)6.* of this rule, an installation authorized to operate under a general permit is subject to enforcement for operating without an individual part 70 operating permit if the installation is determined not to be qualified for the general permit.

5. Portable installations. An installation may apply for a single

permit authorizing emissions from similar operations by the same installation owner or operator at multiple temporary locations.

A. Qualification criteria. To qualify for a permit under this paragraph *[(6)](5)(C)5*, the applicant's operation must be temporary and involve at least one (1) change of location during the permit term. Affected sources shall not be authorized as temporary installations under the acid rain program unless otherwise provided in rules promulgated under Title IV of the Act.

B. Compliance at each location. The permittee must comply with all applicable requirements at each authorized location.

C. Notice of location change. The owner or operator of the installation must notify the permitting authority at least ten (10) days in advance of each change of location.

6. Permit shield.

A. Express permit statement required. Part 70 operating permits shall include express provisions stating that compliance with the conditions of the permit shall be deemed compliance with all applicable requirements as of the date of permit issuance, provided that—

(I) The applicable requirements are included and specifically identified in the permit; or

(II) The permitting authority, in acting on the permit revision or permit application, determines in writing that other requirements, as specifically identified in the permit, are not applicable to the installation and the permit expressly includes that determination or a concise summary of it.

B. Exceptions to permit protection. The permit shield does not affect the following:

(I) The provisions of section 303 of the Act or section 643.090, RSMo, concerning emergency orders;

(II) Liability for any violation of an applicable requirement which occurred prior to, or was existing at, the time of permit issuance;

(III) The applicable requirements of the acid rain program;

(IV) The administrator's authority to obtain information;

or

(V) Any other permit or extra-permit provisions, terms, or conditions expressly excluded from the permit shield provisions of this rule.

7. Emergency provisions.

A. Definition. For the purposes of a part 70 operating permit, an emergency or upset means any condition arising from sudden and not reasonably foreseeable events beyond the control of the permittee, including acts of God, which require immediate corrective action to restore normal operation and that causes the installation to exceed a technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency or upset. An emergency or upset *[shall]* **does** not include noncompliance caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.

B. Affirmative defense requirements. The permitting authority shall include in each permit a provision stating that an emergency or upset constitutes an affirmative defense to an enforcement action brought for noncompliance with technology-based emissions limitations. To establish an emergency- or upset-based defense, the permittee must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, the following:

(I) An emergency or upset occurred and the permittee can identify the source of the emergency or upset;

(II) The installation was being operated properly;

(III) The permittee took all reasonable steps to minimize emissions that exceeded technology-based emissions limitations or the requirements in the permit; and

(IV) The permittee submitted notice of the emergency to the permitting authority within two (2) working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

8. Operational flexibility (installation changes not requiring per-

mit revisions). An installation that has been issued a part 70 operating permit under this rule is not required to apply for or obtain a permit revision in order to make any of the changes to the permitted installation described in subparagraph *[(6)](5)(C)8.A.* of this rule if the changes are not Title I modification and the changes do not cause emissions to exceed emissions allowable under the permit, and the changes do not result in the emission of any air contaminant not previously emitted. The installation shall notify the permitting authority and the administrator at least seven (7) days in advance of these changes, except as allowed for emergency or upset conditions. Emissions allowable under the permit means a federally-enforceable permit term or condition determined at issuance to be required by an applicable requirement that establishes an emissions limit (including a work practice standard) or a federally-enforceable emissions cap that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject.

A. Section 502(b)(10) changes. Changes that, under section 502(b)(10) of the Act, contravene an express permit term may be made without a permit revision, except for changes that would violate applicable requirements of the Act or contravene federally-enforceable monitoring (including test methods), record-keeping, reporting, or compliance requirements of the permit.

(I) Before making a change under this provision, the permittee shall provide advance written notice to the permitting authority and to the administrator, describing the change to be made, the date on which the change will occur, any changes in emissions, and any permit terms and conditions that are affected. The permittee shall maintain a copy of the notice with the permit, and the permitting authority shall place a copy with the permit in the public file. Written notice shall be provided to the administrator and the permitting authority at least seven (7) days before the change is to be made. If less than seven (7) days' notice is provided because of a need to respond more quickly to these unanticipated conditions, the permittee shall provide notice to the administrator and the permitting authority as soon as possible after learning of the need to make the change.

(II) The permit shield shall not apply to these changes.

B. SIP-based emissions trading changes. Changes associated with trading emissions increases and decreases within a permitted installation may be made without a permit revision if the SIP provides for these trades. The permit shall contain terms and conditions governing the trading of emissions.

(I) For these changes, the advance written notice provided by the permittee shall identify the underlying authority authorizing the trade and shall state when the change will occur, the types and quantities of emissions to be traded, the permit terms or other applicable requirements with which the source will comply through emissions trading, and any other information as may be required by the applicable requirement authorizing the emissions trade.

(II) The permit shield shall not apply to these changes. Compliance will be assessed according to the terms of the implementation plan authorizing the trade.

C. Emissions cap-based changes. Changes associated with the trading of emissions increases and decreases within a permitted installation may be made without a permit revision if this trading is solely for the purpose of complying with the federally-enforceable emissions cap that was established in the permit at the applicant's request, independent of otherwise applicable requirements. For these changes, the advance written notice provided by the permittee shall identify the underlying authority authorizing the emissions trade and shall state when the change will occur, the types and quantities of emissions to be traded, the permit terms, or other applicable requirements with which the source will comply through emissions trading, and any other information as may be required by the applicable requirement authorizing the emissions trade. The permit shield does apply to these changes.

9. Off-permit changes. Except as provided in subparagraph *[(6)](5)(C)9.A.* in this rule, a part 70 permitted installation may

make any change in its permitted installation's operations, activities, or emissions that is not addressed in, constrained by, or prohibited by the permit without obtaining a permit revision. Insignificant activities listed in the permit, but not otherwise addressed in or prohibited by the permit, *[shall]* are not *[be]* considered to be constrained by the permit for purposes of the off-permit provisions of this section. Off-permit changes shall be subject to the following requirements and restrictions:

A. Compliance with applicable requirements. The change must meet all applicable requirements of the Act and may not violate any existing permit term or condition; no permittee may change a permitted installation without a permit revision, even if the change is not addressed in or constrained by, the permit, if this change is subject to any requirements under Title IV of the Act or is a Title I modification;

B. Contemporaneous notice, except insignificant activities. The permittee must provide contemporaneous written notice of the change to the permitting authority and to the administrator. This notice *[shall]* is not *[be]* required for changes that are insignificant activities under paragraph *[(6)](5)(B)3.* of this rule. This written notice shall describe each change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change;

C. Record of changes. The permittee shall keep a record describing all changes made at the installation that result in emissions of a regulated air pollutant subject to an applicable requirement and the emissions resulting from these changes; and

D. Permit shield not applicable. The permit shield shall not apply to these changes.

(D) Unified Review. When the construction or modification and operation of any installation requires a construction permit under 10 CSR 10-6.060, and an operating permit or its amendment under this rule, the installation shall receive a unified construction and operating permit or its amendments, review, hearing, and approval process, unless the applicant requests in writing that the construction and operating permit, or its amendment application, be reviewed separately. Under this unified review process, the applicant shall submit all the applications, forms, and other information required by the permitting authority.

1. Review of applications. The permitting authority shall complete any unified review within one hundred eighty-four (184) days, as provided under the procedures of this rule and 10 CSR 10-6.060 Construction Permits Required.

2. Issuance of permits. As soon as the unified review process is completed, if the applicant complies with all applicable requirements under this rule and 10 CSR 10-6.060, the construction permit and the operating permit or its amendment shall be issued to the applicant and the applicant may commence construction. The operating permit or its amendment shall be retained by the permitting authority until validated pursuant to this subsection *[(6)](5)(D)*.

3. Validation of operating permits. Within one hundred and eighty (180) days after commencing operation, the holder of an operating permit or its amendment issued by the unified review processing shall submit to the permitting authority all information required by the permitting authority to demonstrate compliance with the terms and conditions of the issued operating permit or its amendment. The permittee shall also provide information identifying any applicable requirements which became applicable subsequent to issuance of the operating permit. Within thirty (30) days after the applicant's request for validation, the permitting authority will take action denying or approving validation of the issued operating permit or its amendment. If the permittee demonstrates compliance with both the construction and operating permits, and all of the requirements for permit issuance in subsection *[(6)](5)(E)* of this rule have been met, the permitting authority shall validate the operating permit and forward it to the permittee. No part 70 permit will be validated unless—

A. At the time of validation, the permitting authority certifies that the issued permit contains all applicable requirements; or

B. The procedures for permit renewal in paragraph *[(6)](5)(E)3.* have occurred prior to validation to insure the inclusion of any new applicable requirements to which the part 70 permit is subject.

(E) Permit Issuance, Renewal, Reopenings, and Revisions.

1. Action on application.

A. General requirements. A part 70 operating permit, permit modification, or permit renewal may be issued only if all of the following conditions have been met:

(I) Except for a general permit authorization, the permitting authority has received a complete application for a permit, permit modification, or permit renewal;

(II) Except for permit modifications qualifying for minor permit modification procedures, the permitting authority has complied with the requirements for public participation;

(III) The permitting authority has complied with the requirements for notifying and responding to affected states;

(IV) The permitting authority finds that the conditions of the permit provide for compliance with all applicable requirements and the requirements of the Act and the requirements of this rule; and

(V) The administrator has received a copy of the draft permit and any notices required, and has not objected to issuance of the permit under 40 CFR 70.8(c) within the time specified therein.

B. Completeness determination. After receipt of an application, the permitting authority promptly shall provide notice to the applicant of whether the application is complete. Unless the permitting authority notifies the applicant that the application is not complete within sixty (60) days after receipt, the application shall be deemed complete.

(I) The permitting authority shall make available to applicants all the necessary application forms, together with a checklist of items required for a complete application package. An application will be deemed complete in the first instance if the applicant submits a completed application form, together with the other items on the checklist.

(II) No completeness determination shall be required for applications for minor permit modifications.

C. Drafts for public comment. Following review of an application, the permitting authority shall issue a draft permit, draft permit modification, or draft permit renewal for public comment, in accordance with section *[(7)](6)*. The draft shall be accompanied by a statement setting forth the legal and factual basis for the draft permit conditions (including references to applicable statutory or regulatory provisions). The permitting authority shall send this statement to the administrator, to affected states, and to the applicant and shall place a copy in the public file.

D. Proposals for review. Following the end of the public comment period, the permitting authority shall prepare and submit to the administrator a draft permit, permit modification, or permit renewal.

(I) The draft permit, modification, or renewal shall be issued no later than forty-five (45) days preceding the deadline for final action under this section and shall contain all applicable requirements that have been promulgated and made applicable to the installation as of the date of issuance of the draft permit.

(II) If new requirements are promulgated or otherwise become newly applicable to the installation following the issuance of the draft permit but before issuance of a final permit (or in the case of unified review, before validation of an issued permit), the permitting authority may elect to either—

(a) Extend or reopen the public comment period to solicit comment on additional draft permit provisions to implement the new requirements; or

(b) If the permitting authority determines that this extension or reopening of the public comment period would delay issuance of the permit unduly, the permitting authority may include in the permit a provision stating that the permit is reopened upon issuance or validation to incorporate the new requirements and stating that the

new requirements are excluded from the protection of the permit shield. If the permitting authority elects to issue the permit without incorporating the new requirements, the permitting authority shall institute, within thirty (30) days after the new requirements become applicable to the source, proceedings pursuant to this section to reopen the permit to incorporate the new requirements. These reopening proceedings may be instituted, but need not be completed, before issuance of the final permit.

E. Action following the administrator's review.

(I) Upon receipt of notice that the administrator will not object to a permit, permit modification, or permit renewal that has been submitted for the administrator's review pursuant to this section, the permitting authority shall issue the permit, permit modification, or permit renewal forthwith, but in no event later than the fifth day following receipt of the notice from the administrator.

(II) Forty-five (45) days after receipt by the administrator of a draft permit, permit modification, or permit renewal for the administrator's review, and if the administrator has not notified the permitting authority that s/he objects to the permit action, the permitting authority shall promptly issue the permit, permit modification, or permit renewal, but in no event later than the fiftieth day following receipt by the administrator.

(III) If the administrator objects to the permit, modification, or renewal, the permit shall not be issued and the permitting authority shall consult with the administrator and the applicant, and shall submit a revised proposal to the administrator within ninety (90) days after the date of the administrator's objection. If the permitting authority does not revise the permit, the permitting authority will inform the administrator within ninety (90) days following the date of the objection and decline to make those revisions. If the administrator disagrees with the permitting authority, the administrator may issue the permit with the revisions incorporated.

F. Final actions.

(I) Noninitial applications. Except as provided in this subsection *[(6)](5)(E)*, the permitting authority shall take final action on each application for a part 70 operating permit within eighteen (18) months after receiving a complete application. Final action on each application for a significant permit modification or permit renewal shall be taken within six (6) months after receipt of a complete application. For each application, the permitting authority shall submit a draft permit, modification, or renewal to the administrator no later than forty-five (45) days before the deadline for final action established in this section. The permitting authority shall take action on any permit, permit modification, or permit renewal issued in compliance with rules promulgated under Title IV or V of the Act for the permitting of affected installations under the acid rain program within the time specified in those regulations.

(II) Initial applications. Applications accepted under the registry system shall be acted upon according to that registry.

G. Order for acting on applications. To the extent feasible, applications shall be acted upon in the order received, except that—

(I) Priority shall be given to taking final action on applications for construction or permit modification under Title I, Parts C and D of the Act and to applications for general permits. To the extent feasible, final action on these applications shall be taken within six (6) months following receipt of a complete application;

(II) For processing purposes, the permitting authority may group together applications addressing similar installations; and

(III) The permitting authority may give expedited treatment to simple applications that do not require significant review (for example, permits incorporating few or no substantive regulatory requirements).

2. Application shield.

A. Protection for not having a permit. If an installation subject to the requirement to obtain a permit under this section submits a timely and complete application for permit issuance or renewal, that installation's failure to have an issued permit shall not be a violation of the requirement to have the permit until the permitting

authority takes final action on the application. This application protection shall cease to apply if, subsequent to a completeness determination, the applicant fails to submit, by the deadline specified in writing by the permitting authority, any additional information identified as being reasonably required to process the application.

B. Loss of protection. If an applicant files a timely application that the permitting authority determines is not complete, or if the applicant loses the protection granted under this section as a result of the failure to provide additional information reasonably requested by the permitting authority within the time specified, the applicant is in violation of this section for failure to have an issued permit.

C. Construction permits not affected. The submittal of a complete part 70 operating permit application shall not affect the requirement, where applicable, that an installation have a construction permit.

3. Permit renewal and expiration.

A. Renewal application requirements. Applications for permit renewals shall be subject to the same procedural requirements, including public participation, affected state comment, and the administrator review, that apply to initial permit issuance. The permitting authority, in issuing a permit or renewal permit, may identify those portions that are proposed to be revised, supplemented, or deleted.

B. Timely application. An installation's right to operate shall terminate upon the expiration of the permit, unless a complete permit renewal application is submitted at least six (6) months before the date of expiration, or unless the permitting authority takes final action approving an application for a permit renewal by the expiration date.

C. Extension of expired permits. If a timely and complete application for a permit renewal is submitted, but the permitting authority fails to take final action to issue or deny the renewal permit before the end of the term of the previous permit, the previous permit shall not expire until the renewal permit is issued or denied. Any permit shield granted under the previous permit shall continue in effect during this period of time. However, the administrator may invoke its authority under section 505(e) of the Act to terminate or revoke and reissue the permit.

4. Administrative permit amendments.

A. Definition. An administrative permit amendment is a permit revision that—

(I) Corrects typographical errors;

(II) Identifies a change in the name, address, or phone number of any person identified in the permit, or provides a similar minor administrative change at the installation;

(III) Requires more frequent monitoring or reporting by the permittee;

(IV) Allows for a change in ownership or operational control of an installation where no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee *[must be]* is submitted to the permitting authority; and/or

(V) Incorporates in the part 70 operating permit the requirements of a unified construction permit issued by the permitting authority.

B. Acid rain provisions. For purposes of any acid rain portion of a part 70 operating permit, administrative permit amendments shall be governed by rules promulgated under Title IV of the Act.

C. Procedures. An administrative permit amendment shall be made by the permitting authority under the following procedures:

(I) The permitting authority shall take final action on a request for an administrative permit amendment within sixty (60) days after receipt of the request, and may incorporate the proposed changes in a permit without providing notice to the public or affected states, if any of the permit revisions are designated as having been made pursuant to this paragraph *[(6)](5)(E)4.*;

(II) The permitting authority shall transmit a copy of the

amended permit to the administrator; and

(III) An installation may implement the changes addressed in a request for an administrative permit amendment immediately upon submittal of the request.

D. Permit shield applicable. The permitting authority, upon taking final action granting a request for an administrative permit amendment, shall allow coverage by the permit shield.

5. Permit modifications.

A. Definition. A permit modification is any revision to a part 70 operating permit which is not an administrative amendment under paragraph *[(6)](5)(E)4.* of this rule. A permit modification for the purposes of the acid rain portion of the permit shall be governed by regulations promulgated under Title IV of the Act.

B. Minor permit modification.

(I) Criteria.

(a) Minor permit modifications involve changes to an installation that do not—

I. Violate any applicable requirement;

II. Involve significant changes to monitoring, reporting, or record-keeping requirements in the permit;

III. Require or change any case-by-case or source-specific determination contained in the permit, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;

IV. Establish or change a permit term for which there is no corresponding underlying applicable requirement and which the source has assumed in order to avoid an applicable requirement to which it would otherwise be subject, such as a federally-enforceable emissions cap voluntarily agreed to in order to avoid classification as a Title I modification or an alternative emissions limit approved pursuant to 112(i)(5) of the Act;

V. Constitute a Title I modification; and

VI. Constitute a significant permit modification.

(b) Notwithstanding subpart *[(6)](5)(E)5.B.(I)(a)* and subparagraph *[(6)](5)(E)5.C.* of this section, minor permit modification procedures may be used for permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, to the extent that such minor permit modification procedures are explicitly provided for in an applicable implementation plan or in applicable requirements promulgated by EPA.

(II) Procedures.

(a) The applicant should complete a minor permit modification form application which is consistent with the requirements of this section *[(6)](5)*, and which includes at least the following information:

I. A description of the proposed change, the resulting emissions, and any new applicable requirements;

II. The applicant's draft modified permit;

III. Certification by a responsible official consistent with paragraph *[(6)](5)(B)4.* of this rule, that the proposed modification meets the criteria for use of minor permit modification procedures; and

IV. Completed forms to enable the permitting authority to notify the administrator and affected states.

(b) The permitting authority will notify the administrator and affected states within five (5) days after receipt of the application.

(c) Public participation requirements are not applicable to minor permit modifications.

(d) Within thirty (30) days after receiving the minor permit modification application, the permitting authority will notify the applicant whether the application is deemed complete or if further information is needed to deem it so.

(e) Within ninety (90) days after receiving the minor permit modification application, or fifteen (15) days after the end of the administrator's forty-five (45)-day review period, whichever is later, the permitting authority shall—

I. Issue the permit modification as proposed;

II. Deny the permit modification;

III. Determine that the requested change is a significant permit modification that should be reviewed as such; or

IV. Revise the draft modified permit and notify the applicant and the administrator by providing a written copy of the proposed intended changes, a written statement of the factual and legal reasons for the changes, and notice of the rights of the applicant and the administrator to appeal or object to the changes, including any deadlines for this appeal or objection.

(f) An applicant for a minor permit modification may make the change proposed immediately after filing the application. After making the change, and until the permitting authority takes any of the actions specified in this section *[(6)](5)*, the applicant must comply with both the applicable requirements governing the change and the proposed modified permit terms and conditions. During this time period, the installation need not comply with the existing permit terms and conditions the applicant is seeking to modify. However, if the applicant fails to comply with the proposed modified permit terms and conditions during this time period, the existing permit terms and conditions which the applicant is seeking to modify may be enforced against the installation.

(III) Permit shield not applicable. The permit shield does not apply to minor permit modifications.

[(IV) Public notice. The permitting authority shall provide public notice of a change proposed in a minor permit modification application when it determines that the proposed change is of sufficient consequence that the public may have an interest in being informed. The procedures for the public notice shall be as follows:

(a) Notice shall be given by publication in a newspaper of general circulation in the area where the installation is located or in a state publication designed to give general public notice, and to persons on a mailing list developed by the permitting authority, including those who request in writing to be on the list;

(b) The notice shall identify: the installation; the name and address of the permittee; the name and address of the permitting authority; the activity(ies) involved in the permit action; any emissions change involved in the proposed minor permit modification; the name, address, and telephone number of a person from whom interested persons may obtain additional information, including copies of the draft permit, the application, all relevant supporting materials, and all other materials available to the permitting authority that are relevant to the permit decision; and

(c) The permitting authority shall provide public notice, as provided in this section, promptly upon receipt of the source's minor permit modification application; however, the timing and content of this notice shall not be grounds for a challenge to the permitting authority's final action.]

C. Group processing of minor permit modifications. Pursuant to this paragraph *[(6)](5)(E)5.*, the permitting authority may modify the procedures outlined in this section *[(6)](5)* to process groups of an installation's applications for certain modifications eligible for minor permit modification processing.

(I) Criteria. Group processing of proposed minor permit modifications may be used only for those which—

(a) Meet the criteria for minor permit modification procedures under this section; and

(b) Collectively are below the following threshold level: ten percent (10%) of the emissions allowed by the permit for the emissions unit for which the change is proposed; twenty percent (20%) of the applicable definition of a part 70 installation; or five (5) tons per year, whichever is least.

(II) Applications. An application requesting the use of group processing procedures shall meet the requirements of this subparagraph and shall include the following:

(a) A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;

(b) The applicant's draft modified permit;

(c) Certification by a responsible official, consistent with this section, that the proposed modification meets the criteria for use of group processing procedures and a request that these procedures be used;

(d) A list of the installation's other pending applications awaiting group processing and a determination of whether the requested modification, aggregated with these other applications, equals or exceeds the threshold established under this section *[(6)] (5)*;

(e) Certification, consistent with this section *[(6)] (5)*, that the applicant has notified the administrator of the proposed modification. This notification need only contain a brief description of the proposed modification; and

(f) Completed forms for the permitting authority to use to notify the administrator and affected states.

(III) Administrator and affected state notification. On a quarterly basis or within five (5) business days after receipt of an application demonstrating that the aggregate of an installation's pending applications equals or exceeds the threshold level established under this section, whichever is earlier, the permitting authority promptly, in accordance with section *[(7)] (6)* of this rule, shall notify the administrator and affected states of the proposed permit modifications. The permitting authority shall send any notice required to the administrator.

(IV) Timetable for issuance. The provisions of this section shall apply to modifications eligible for group processing, except that the permitting authority shall take one (1) of the actions specified in this paragraph within one hundred eighty (180) days after receipt of the application or fifteen (15) days after the end of the administrator's forty-five (45)-day review period, whichever is later.

(V) Installation's ability to make change. The provisions of this subpart *[(6)](5)(E)5.B.(II)(f)* shall apply to modifications eligible for group processing.

(VI) Permit shield not applicable. The provisions of part *[(6)](5)(E)5.B.(III)* shall apply to modifications eligible for group processing.

[(VII) Public notice. The provisions of this part (6)(E)5.B.(IV) shall apply to modifications eligible for group processing.]

D. Significant permit modifications.

(I) Definition. Any permit revision which is not a minor modification or administrative permit amendment is a significant permit modification. This revision includes, but is not limited to, significant changes in monitoring, reporting, or record keeping permit terms and any change in the method of measuring compliance with existing permit requirements. Criteria for determining whether a proposed change is significant shall include the magnitude of the change and the resulting impact on the environment.

(II) Procedures.

(a) An applicant for a significant permit modification shall adhere to all the relevant requirements for an initial permit application under section *[(6)] (5)* of this rule, as well as requirements for public participation under section *[(7)] (6)*, and review by the administrator and affected states under subsection *[(6)](5)(F)* except—

I. The applicant should use the form for a significant permit modification application, rather than the form for an initial permit issuance; and

II. The permitting authority will complete review of significant permit modification applications within nine (9) months after receipt of an application.

6. Reopening permits for cause.

A. Cause to reopen. A part 70 operating permit shall be reopened for cause if—

(I) The permitting authority receives notice from the administrator that the administrator has granted a petition for disapproval of a permit pursuant to 40 CFR 70.8(d), provided that the reopening may be stayed pending judicial review of that determination;

(II) The permitting authority or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions limitations standards or other terms of the permit;

(III) Additional applicable requirements under the Act become applicable to the installation; however, reopening on this ground is not required if—

(a) The permit has a remaining term of less than three (3) years;

(b) The effective date of the requirement is later than the date on which the permit is due to expire; or

(c) The additional applicable requirements are implemented in a general permit that is applicable to the installation and the installation receives authorization for coverage under that general permit;

(IV) The installation is an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable to that source, provided that, upon approval by the administrator, excess emissions offset plans shall be deemed to be incorporated into the permit; or

(V) The permitting authority or the administrator determines that the permit must be reopened and revised to assure compliance with applicable requirements.

B. Notice to the permittee. If the permitting authority finds reason to believe that a permit should be reopened for cause, it shall provide at least thirty (30) day's prior written notice to the permittee, except the notice period may be less if the permitting authority finds that an emergency exists.

(I) This notice shall include a statement of the terms and conditions that the permitting authority proposes to change, delete, or add to the permit. If the permitting authority does not have sufficient information to determine the terms and conditions that must be changed, deleted, or added to the permit, the notice shall request the permittee to provide that information within a period of time specified in the notice, which shall be not less than thirty (30) days except in the case of an emergency.

(II) If the proposed reopening is pursuant to subparagraph *[(6)](5)(E)6.A.* of this rule, the permitting authority shall give the permittee an opportunity to provide evidence that the permit should not be reopened.

C. Procedures for reissuance. In reissuing the permit, the permitting authority shall follow the procedures established under subsection *[(6)](5)(E)*. The permittee shall in all cases be afforded an opportunity to comment on the revised permit terms.

D. Judicial review. Upon issuance of the revised permit, both the determination to reopen the permit and the revised permit terms shall be subject to judicial review.

E. Extension of permit shield. While a reopening proceeding is pending, the permittee shall be entitled to the continued protection of any permit shield provided in the permit pending issuance of a revised permit, unless the permitting authority specifically suspends the permit shield on the basis of a finding that this suspension is necessary to implement applicable requirements. If this finding applies only to certain applicable requirements or to certain permit terms, the suspension shall extend only to those requirements or terms.

F. Deadline for completion. Any reopening and reissuance proceeding shall be completed within eighteen (18) months after promulgation of the applicable requirements.

7. Reopening permits for cause by the administrator.

A. Notice of cause. If the permitting authority receives notice from the administrator that the administrator has found cause to revoke, modify, or reopen and reissue a part 70 operating permit, the permitting authority, within ten (10) days after receipt of this notification,

shall provide notice to the permittee. The notice to the permittee shall include a copy of the notice from the administrator and invite the permittee to comment in writing on the proposed action.

B. Proposed permitting authority response. Within ninety (90) days following receipt of the notification from the administrator, the permitting authority shall issue and forward to the administrator a proposed determination in response to the administrator's notification. The permitting authority may request an additional ninety (90) days for this submission if this time is required to obtain a new or revised permit application or other information from the permittee.

C. Comment by the administrator. The permitting authority shall address any further comment or objection from the administrator on the permitting authority's response to the administrator notification pursuant to this section.

8. Revocations and terminations.

A. Cause for revocation. The permitting authority may revoke a part 70 operating permit only upon request of the permittee or for cause. For purposes of this section, cause for revocation exists if—

(I) There is a pattern of unresolved and repeated noncompliance with the terms and conditions of the permit and the permittee has refused to take appropriate action (such as a schedule of compliance) to resolve the noncompliance;

(II) The permittee has failed to disclose material facts relevant to issuance of the permit or has knowingly submitted false or misleading information to the permitting authority;

(III) The permitting authority finds that the permitted installation or activity endangers public health, safety, or the environment, and that the danger cannot be removed by a modification of the terms of the permit; or

(IV) The permittee has failed to pay a civil or criminal penalty imposed for violations of the permit.

B. Notice to permittee. Upon finding that cause exists for the revocation of a permit, the permitting authority shall notify the permittee of that finding in writing, stating the reasons for the proposed revocation. Within thirty (30) days following receipt of the notice, the permittee may submit written comments concerning the proposed revocation. If the permitting authority after that makes a final determination to revoke the permit, it shall provide a written notice to the permittee specifying the reasons for the decision and the effective date of the revocation.

C. Conditional revocation. A permit revocation issued under this section may be issued conditionally, with a future effective date, and may specify that the revocation will not take effect if the permittee satisfies the specified conditions before the effective date.

D. Application for termination. A permittee may apply at any time for termination of all or a portion of its part 70 operating permit relating solely to operations, activities, and emissions that have been permanently discontinued at the permitted installation. An application for termination shall identify with specificity the permit or permit terms that relate to the discontinued operations, activities, and emissions. The permitting authority shall act on an application for termination on this ground within ninety (90) days after receipt, and shall grant the application for termination upon finding that the permit terms for which termination is sought relate solely to operations, activities, and emissions that have been permanently discontinued. In terminating all or portions of a permit pursuant to this subsection, the permitting authority may make appropriate orders for the submission of a final report or other information from the permittee to verify the complete discontinuation of the relevant operations, activities, and emissions.

E. Application for termination based on general permit. A permittee may apply for termination of its permit on the ground that its operations, activities, and emissions are fully covered by a general permit for which it has applied and received coverage. The permitting authority shall act on an application for termination on this ground within ninety (90) days after receipt, and shall grant the application upon a finding that the permittee's installation's operations, activities, and emissions are fully covered by a general permit.

F. Application for new permit. An installation that has received a final revocation or termination of its permit may apply for a new permit.

9. Case-by-case determinations. If applicable requirements require the permitting authority to make a case-by-case determination of an emission limitation, technology requirement, work practice standard, or other requirement for an installation, and to include terms and conditions implementing that determination in the installation's part 70 operating permit, the installation shall include in its permit application a proposed determination, together with the data and other information upon which the determination is to be based, and proposed terms and conditions to implement the determination. Upon receipt of a request from the applicant, the permitting authority shall meet with the applicant before the permit application is submitted to discuss the determination and the information required to make it. In the event the permitting authority determines that the applicant's proposed determination and implementing terms and conditions should be revised in the draft permit or the final permit, the permitting authority shall in all cases inform the applicant of the changes to be made, and allow the applicant to comment on those changes before issuing the draft permit or final permit.

10. Public participation. The procedures of section [77] (6) of this rule shall be followed.

11. Judicial review. Any final action in granting or denying an application for a permit, permit amendment, or modification or permit renewal shall be subject to Missouri Air Conservation Commission review as provided in 643.078 and 643.130, RSMo upon an appeal filed by the applicant or permittee, or by any affected state or other person who participated in the public comment process. If no public comment procedure was employed for the action under challenge, an application for review may be filed by the permittee or an affected state. The opportunity for judicial review provided for in this subsection shall be the exclusive means for obtaining judicial review of any permit action.

A. Deadline for filing. No application for judicial review may be filed more than ninety (90) days following the final action on which review is sought, unless the grounds for review arose at a later time, in which case the application for review shall be filed within ninety (90) days of the date on which the grounds for review first arose, and review shall be limited to such later-arising grounds.

B. Scope of review. Any application for judicial review shall be limited to issues that—

(I) Were raised in written comments filed with the permitting authority or during a public hearing on the proposed permit action (if the grounds on which review is sought were known at that time), except that this restriction *[shall]* **does** not apply if the person seeking review was not afforded an advance opportunity to comment on the challenged action; and

(II) Are germane and material to the permit action at issue.

C. Deadline for final action. For purposes of this section [66] (5), final action shall include a failure by the permitting authority to take final action to issue or deny an application within the time specified in these regulations.

(F) Permit Review by the Administrator and Affected States.

1. Administrator review.

A. Copies of applications, proposals, and final actions. The applicant will provide two (2) copies of the information included in an application under this section. The permitting authority will forward to the administrator one (1) copy of each permit application, including application for permit modification, request for validation, application for permit renewal, draft permit, and each final operating permit, modified permit, and permit renewal.

B. Administrator's objection. No permit shall be issued or validated under this section if the administrator objects to its issuance in writing within forty-five (45) days after receipt of the draft permit, modified permit, or permit renewal and all necessary supporting information.

C. Failure to respond to objection. If the permitting authority

does not respond to an objection of the administrator by transmitting a revised draft permit, modified permit, or renewal permit within ninety (90) days after receipt of such objection, the administrator may issue or deny the permit, modified permit, or permit renewal in accordance with the Act.

D. Public petitions for objection. If the administrator does not object to a proposed permit action, any person may petition the administrator to make an objection within sixty (60) days after expiration of the administrator's forty-five (45)-day review period.

(I) This petition may only be based on objections raised during the public review process, unless the petitioner demonstrates that it was impracticable to raise objection during the public review period (including when the grounds for objection arose after that period).

(II) If the administrator responds to a petition filed under this section by issuing an objection, the permitting authority will not issue the permit until the objection has been resolved. If the permit was issued after the administrator's forty-five (45)-day review period, and prior to any objection by the administrator, the permitting authority shall treat that objection as if the administrator were reopening the permit for cause. In these circumstances, the petition to the administrator does not stay the effectiveness of the issued permit, and the permittee *[shall]* is not *[be]* in violation of the requirement to have submitted a complete and timely permit application.

2. Affected state review.

A. Notice of draft actions. The permitting authority will give notice of each draft permit, modified permit, and renewed permit to any affected state on or before the time that the permitting authority provides notice to the public, except in the case of minor permit modifications. Affected states may comment on the draft permit action during the period allowed for public comment, as shall be set forth in a notice to affected states.

B. Refusal to accept recommendations. If the permitting authority refuses to accept all recommendations for a proposed permit action that any affected state has submitted during the review period, the permitting authority shall notify the administrator and the affected state in writing of its reasons for not accepting the recommendations.

[(7)](6) Public Participation. Except for proposed modifications qualifying for the minor permit modification procedures, all permit proceedings, including initial permit issuance, significant permit modifications, and permit renewals, shall be conducted in accordance with the procedures for public participation in this section *[(7)] (6)*.

(A) Drafts for Public Comment and Public Notice. After receipt of an application for a permit, significant permit modification, or permit renewal, and no later than sixty (60) days before the deadline for issuance of a permit, significant permit modification, or permit renewal for the administrator's review, the permitting authority shall issue a draft permit and solicit comment from the applicant, affected states, and the public as follows:

1. The permitting authority shall provide notice to the public by—

A. Making available in at least one (1) location in the area in which the installation is located a public file containing copies of all materials that the applicant has submitted other than those granted confidential treatment, copies of the preliminary determination and draft permit, modified permit, or permit renewal, and a copy or summary of other materials, if any, considered in making the preliminary permit determination; or

B. State publication or web site designed to give general public notice details of the proposed action or publishing in at least one (1) newspaper of general circulation in the area in which the installation is located, a notice of the application, the preliminary permit determination, the location of the public file, the procedures for submitting written comments and for requesting a public hearing, and the date, time, and location for a public hearing if one is to be held; and

2. Copies of the notice required shall be sent to the applicant and to the representatives of affected states designated by those states to receive the notices.

(B) Public Notice. The public notice shall establish a period of not less than thirty (30) days following publication of the notice for the submission of written comments, and *[shall]* identify the affected installation, the name and address of the applicant or permittee, the name and address of a permitting authority representative with responsibility for the permitting action, the activity(ies) involved in the permit action, the emissions change involved in any permit modification and the location of the public file.

(C) Public Hearing Opportunity. The permitting authority shall hold an informal public hearing on the draft permit, modified permit, or permit renewal if—

1. A timely request is made for such a hearing during the public comment period; and

2. The person requesting the hearing identifies material issues concerning the preliminary permit determination and the permitting authority determines that a public hearing will be useful in resolving those issues.

(D) Time of Public Hearing. Any public hearing held under this section shall be held no earlier than the thirty-first day following publication of the public notice and no later than the thirtieth day preceding the deadline for the draft permit, modified permit, or permit renewal under this section.

(E) Scope of Public Hearing. The permitting authority may limit participation at the public hearing to issues raised in written comments submitted during the public comment period. The officer conducting the hearing, as appropriate, may impose additional limitations, including time restrictions.

(F) Applicant's Opportunity to Respond to Comments. The applicant shall be afforded an opportunity to submit, within ten (10) days following the close of the public comment period or the public hearing, whichever is later, a response to any comments made.

(G) Consideration of Comments Received. The permitting authority shall consider all comments submitted by the applicant, the public, and affected states in reaching its final determination and issuing the proposed permit, modified permit, or permit renewal for the administrator's review. The permitting authority shall maintain a list of all commenters and a summary of the issues raised and *[shall]* make that information available in the public file and supply it to the administrator upon request.

(H) Written Response to Comments. At the time a draft permit, modified permit, or permit renewal is proposed for the administrator's review, the permitting authority shall issue a written response to all comments submitted by affected states and all significant comments submitted by the applicant and the public. Copies of this written response shall be provided to the administrator, affected states, and the applicant and a copy shall be placed in the public file.

AUTHORITY: section 643.050, RSMo [Supp. 2013] 2016. Original rule filed Sept. 2, 1993, effective May 9, 1994. For intervening history, please consult the Code of State Regulations. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed amendment will begin at 9:00 a.m., September 27, 2018. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded to any interested person. Interested persons, whether or not heard, may submit a

statement of their views until 5:00 p.m., October 4, 2018. Send online comments via the proposed rules web page www.dnr.mo.gov/proposed-rules, email comments to apcprulespn@dnr.mo.gov, or written comments to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 6—Air Quality Standards, Definitions, Sampling
and Reference Methods and Air Pollution Control
Regulations for the Entire State of Missouri

PROPOSED AMENDMENT

10 CSR 10-6.170 Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin. The commission proposes to amend sections (1) through (4) and add section (5). If the commission adopts this rule action, the department intends to submit this rule amendment to the U.S. Environmental Protection Agency to replace the current rule that is in the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Proposed Rules website www.dnr.mo.gov/proposed-rules.

PURPOSE: This rule restricts the emission of particulate matter to the ambient air beyond the premises of origin. The purpose of this rulemaking is to comply with Executive Order 17-03 criteria and will remove the unnecessary use of restrictive words. This rulemaking will also restructure the rule into the standard rule organization format and add definitions specific to this rule. The evidence supporting the need for this proposed rulemaking, per 536.016, RSMo, is Executive Order 17-03 and related comments.

[(1) Restrictions to Limit Fugitive Particulate Matter Emissions. It shall be a violation of this regulation if, in the opinion of the staff director—

(A) Any person causes or allows to occur any handling, transporting, or storing of any material; construction, repair, cleaning or demolition of a building or its appurtenances; construction or use of a road, driveway or open area; or operation of a commercial or industrial installation without applying reasonable measures as may be required to prevent, or in a manner which allows or may allow, fugitive particulate matter emissions to go beyond the premises of origin in quantities that the particulate matter may be found on surfaces beyond the property line of origin. The nature or origin of the particulate matter shall be determined to a reasonable degree of certainty by a technique proven to be accurate and approved by the director; or

(B) Any person causes or allows to occur any fugitive particulate matter emissions to remain visible in the ambient air beyond the property line of origin.

(2) Should the director determine that noncompliance with section (1) has occurred at a location, the director may require reasonable control measures, as may be necessary. These measures may include, but are not limited to, the following:

A. Revision of procedures involving construction, repair, cleaning, and demolition of buildings and their appurtenances that produce particulate matter emissions;

B. Paving or frequent cleaning of roads, driveways,

and parking lots;

C. Application of dust-free surfaces;

D. Application of water; and

E. Planting and maintenance of vegetative ground cover.]

(3) Exceptions. Section (1) shall not apply to the following:

(A) Those portions of unpaved public roads that are not designated as nonattainment areas for particulate matter;

(B) Agricultural operations including tilling, planting, cultivating or harvesting within a field, the moving of livestock on foot or the hauling of produce within the confines of a farm; and

(C) Driveways limited to residential use.

(4) The staff director may allow an exemption for unusual and adverse weather conditions for any activity which would otherwise be a violation of section (1). These conditions may include, but are not limited to, high winds, extended dry weather periods and extreme cold weather periods.]

(1) Applicability. This rule applies to any operation, process, or activity resulting in fugitive particulate matter (PM) emissions throughout the state of Missouri, with the following exceptions:

(A) Fugitive PM emissions from unpaved public roads located in areas not designated as nonattainment for PM;

(B) Agricultural operations including tilling, planting, cultivating or harvesting within a field, the moving of livestock on foot, or the hauling of produce within the confines of a farm;

(C) Fugitive PM emissions from driveways limited to residential use; and

(D) Fugitive PM emissions in violation of this rule which, according to the director, occurred due to unusual or adverse weather conditions. These conditions may include, but are not limited to, high winds, extended dry weather periods, and extreme cold weather periods.

(2) Definitions.

(A) Control measure—Any means which reduce the quantity of a pollutant that is emitted into the air.

(B) Director—Director of the Missouri Department of Natural Resources or a representative designated to carry out the duties as described in 643.060, RSMo.

(C) Facility—All contiguous or adjoining property that is under common ownership or control, including properties that are separated only by a road or other public right-of-way.

(D) Fugitive particulate matter emissions—Any particulate matter emissions which could not reasonably be passed through a stack, chimney, vent, or other functionally equivalent opening.

(E) Nonattainment area (NAA)—Any geographic area of the United States which has been designated as nonattainment under section 107 of the Clean Air Act and described in 40 CFR 81.

(F) Particulate matter—Any liquid or solid material, except uncombined water, that exists in a finely divided form.

(3) General Provisions.

(A) Restrictions to Limit Fugitive Particulate Matter Emissions.

1. No person may cause or allow fugitive particulate matter emissions to—

A. Go beyond the premises of origin in such quantities that the particulate matter may be found on surfaces beyond the property line of origin due to the following activities:

(I) Handling, transporting, or storing of any material;

(II) Construction, repair, cleaning, or demolition of a building or its appurtenances;

(III) Construction or use of a road, driveway, or open area; or

(IV) Operation of a commercial or industrial facility; or

B. Remain visible in the ambient air beyond the property line of origin.

2. The nature or origin of the particulate matter will be determined to a reasonable degree of certainty by a technique proven to be accurate and approved by the director.

(B) Should the director determine that noncompliance with subsection (3)(A) has occurred at a location, the director may require reasonable control measures, as may be necessary. These measures may include, but are not limited to, the following:

1. Revision of procedures involving construction, repair, cleaning, and demolition of buildings and their appurtenances that produce particulate matter emissions;

2. Paving or frequent cleaning of roads, driveways, and parking lots;

3. Application of dust-free surfaces;

4. Application of water; and

5. Planting and maintenance of vegetative ground cover.

(4) Reporting and Record Keeping. *(Not Applicable)*

(5) Test Methods. *(Not Applicable)*

AUTHORITY: section 643.050, RSMo [Supp. 1997] 2016. Original rule filed March 5, 1990, effective Nov. 30, 1990. Amended: Filed March 18, 1996, effective Oct. 30, 1996. Amended: Filed Jan. 2, 1998, effective Aug. 30, 1998. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed amendment will begin at 9:00 a.m., September 27, 2018. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded to any interested person. Interested persons, whether or not heard, may submit a statement of their views until 5:00 p.m., October 4, 2018. Send online comments via the proposed rules web page www.dnr.mo.gov/proposed-rules, email comments to apcprulespn@dnr.mo.gov, or written comments to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 6—Air Quality Standards, Definitions, Sampling and Reference Methods and Air Pollution Control Regulations for the Entire State of Missouri

PROPOSED AMENDMENT

10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants. The commission proposes to amend the purpose, subsections (1)(F), (1)(H)–(1)(K), (1)(M)–(1)(O), (3)(B), (3)(D), (3)(F), (4)(A), (5)(A), and (5)(B); add subsection (1)(P); amend section (2); and delete subsection (3)(H) If the commission adopts this rule action, the department intends to submit this rule amendment to the U.S. Environmental Protection Agency to replace the current rule that is in the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air

Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Proposed Rules website www.dnr.mo.gov/proposed-rules.

PURPOSE: The purpose of this rulemaking is to comply with Executive Order 17-03 criteria and will remove the unnecessary use of restrictive words. This rulemaking will also add definitions specific to this rule, remove a requirement for Portland cement kilns to install a continuous monitoring system, update incorporations by reference, and make other changes to clarify rule language. The evidence supporting the need for this proposed rulemaking, per 536.016, RSMo, is Executive Order 17-03.

PURPOSE: This rule specifies the maximum allowable opacity of visible air contaminant emissions[, unless specifically exempt or regulated by 10 CSR 10-6.070] and requires the use of continuous monitoring systems (CMS) on certain air contaminant emission units.

(1) Applicability. This rule applies to all sources of visible emissions, excluding water vapor, throughout the state of Missouri with the exception of the following:

(F) The pyrolysis of wood for the production of charcoal in batch-type charcoal kilns [(Emissions from batch-type charcoal kilns shall comply with the requirements of 10 CSR 10-6.330 Restriction of Emissions From Batch-Type Charcoal Kilns)] regulated under 10 CSR 10-6.330;

(H) Emission units specifically exempt or regulated [by] under 10 CSR 10-6.070 [and the provisions of 40 CFR 60, promulgated as of July 1, 2013, and hereby incorporated by reference in this rule, as published by the U.S. Government Printing Office, 732 N Capitol Street NW, Washington, DC 20401. This rule does not incorporate any subsequent amendments or additions];

(J) Emission units regulated [by] under 40 CFR 63 subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters that meet one (1) of the following criteria:

1. Constructed or reconstructed after June 4, 2010;

2. The unit is subject to a ten percent (10%) opacity limit as described in Table 4 of 40 CFR 63 subpart DDDDD; or

3. The unit is in Table 2 of 40 CFR 63 subpart DDDDD and has a filterable particulate matter limitation of less than or equal to 4E-02 pounds per million British thermal units (lbs/MMBtu);

(K) Fugitive emissions [subject to] regulated under 10 CSR 10-6.170;

(M) Emission units regulated [by] under 40 CFR 63 subpart JJJJJ—National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources that meet all of the following criteria:

1. Constructed or reconstructed after June 4, 2010;

2. In compliance with the 3.0E-02 lbs/MMBtu filterable particulate matter emission limit described in Table 1 of 40 CFR 63 subpart JJJJJ or maintaining opacity to less than or equal to ten percent (10%) as described in Table 3 of 40 CFR 63 subpart JJJJJ; and

3. Demonstrating compliance with a continuous monitoring system (CMS), including a continuous emission monitoring system (CEMS), a continuous opacity monitoring system (COMS), or a continuous parameter monitoring system (CPMS);

(N) Emission units regulated [by] under 40 CFR 63 subpart UUUUU—Mercury and Air Toxics Standards, and demonstrating compliance with a particulate matter continuous emission monitoring system; [and]

(O) Emission units that are contained within and emit only within a building space. This does not include emission units with a [collection] capture device vented outside the building space.; and

(P) Emission units subject to an equivalent or more restrictive

emission limit under—

1. 10 CSR 10-6.075; or
2. Any federally enforceable permit.

(2) Definitions. *[Definitions of certain terms specified in this rule may be found in 10 CSR 10-6.020.]*

(A) Batch-type charcoal kiln—Charcoal kilns that manufacture charcoal with a batch process rather than a continuous process. The batch-type charcoal kiln process typically includes loading wood, sealing the kiln, igniting the wood, and controlled burning of the wood to produce charcoal which is unloaded.

(B) Capacity factor—The ratio (expressed as a percentage) of a power generating unit's actual annual electric output (expressed in MWe-hr) divided by the unit's nameplate capacity multiplied by eight thousand seven hundred sixty (8,760) hours.

(C) Capture device—A hood, enclosed room, floor sweep, or other means of collecting air pollutants into a duct.

(D) Continuous monitoring system (CMS)—A comprehensive term that may include, but is not limited to, continuous emission monitoring systems, continuous opacity monitoring systems, continuous parameter monitoring systems, or other manual or automatic monitoring that is used for demonstrating compliance with this rule on a continuous basis as defined by the regulation.

(E) Continuous opacity monitoring system (COMS)—All equipment required to continuously measure and record the opacity of emissions within a stack or duct. COMS consists of sample interface, analyzer, and data recorder components and usually includes, at a minimum, transmissometers, transmissometer control equipment, and data transmission, acquisition, and recording equipment.

(F) Digester gas—A gas, consisting of mostly methane (CH₄) and carbon dioxide (CO₂), generated during anaerobic digestion when microorganisms break down organic materials in the absence of oxygen.

(G) Director—Director of the Missouri Department of Natural Resources, or a representative designated to carry out duties as described in 643.060, RSMo.

(H) Emission unit—any part or activity of a facility that emits or has the potential to emit any regulated air pollutant.

(I) Excess emissions—The opacity emissions which exceed the requirements of any applicable emission limit within this rule.

(J) Existing emission unit—Any emission unit in operation, installed, or under construction prior to July 11, 1977 that has not been subsequently altered, repaired, or rebuilt at a cost of fifty percent (50%) or more of its replacement cost exclusive of routine maintenance. The cost of installing equipment designed principally for the purpose of air pollution control is not to be considered a cost of altering, repairing, or rebuilding an existing emission unit.

(K) Facility—All contiguous or adjoining property that is under common ownership or control, including properties that are separated only by a road or other public right-of-way.

(L) Fugitive emissions—Those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.

(M) Incinerator—Any article, machine, equipment, contrivance, structure, or part of a structure used to burn refuse or to process refuse material by burning other than by open burning.

(N) Internal combustion engine—Any engine in which power, produced by heat and/or pressure developed in the engine cylinder(s) by burning a mixture of fuel and air, is subsequently converted to mechanical work by means of one (1) or more pistons.

(O) Kansas City metropolitan area—The geographical area comprised of Jackson, Cass, Clay, Platte, Ray, and Buchanan counties.

(P) Landfill gas—A gaseous byproduct of landfills, consisting of mostly methane (CH₄) and carbon dioxide (CO₂), produced by

microorganisms within a landfill under anaerobic conditions.

(Q) Liquefied petroleum gas—A gas consisting of propane, propylene, butane, and butylenes.

(R) Natural gas—A naturally occurring fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions.

(S) New emission unit—Any emission unit which is not permanently shutdown or an existing emission unit as defined in subsection (2)(I) of this rule.

(T) Opacity—The extent to which airborne material obstructs the transmission of incident light and obscures the visual background. Opacity is stated as a percentage of light obstructed and can be measured by a continuous opacity monitoring system or a trained observer. An opacity of one hundred percent (100%) represents a condition in which no light is transmitted, and the background is completely obscured.

(U) Open burning—The burning of any materials where air contaminants resulting from combustion are emitted directly into the ambient air without passing through a stack or chimney from an enclosed chamber. For purposes of this definition, a chamber shall be regarded as enclosed, when, during the time combustion takes place, only those apertures, ducts, stacks, flues, or chimneys, as are necessary to provide combustion air and to permit the escape of exhaust gases, are open.

(V) Outstate area—Any area throughout the state of Missouri except the City of St. Louis and St. Charles, St. Louis, Jefferson, Franklin, Clay, Cass, Buchanan, Ray, Jackson, Platte, and Greene counties.

(W) Particulate matter—Any material, except uncombined water, that exists in a finely divided form as a liquid or solid that enters the atmosphere as a direct emission from a stack or an open source.

(X) Portland cement kiln—A system, including any solid, gaseous, or liquid fuel combustion equipment, used to calcine and fuse raw materials, including limestone and clay, to produce Portland cement clinker.

(Y) Qualified observer—An individual or device with a current certification to measure opacity using one (1) of the methods listed in section (5) of this rule.

(Z) Refinery gas—Any gas that is generated as a byproduct at a petroleum refinery or petrochemical plant and that is combusted separately or in combination with any type of gas.

(AA) Six (6)-minute period—A three-hundred-sixty (360)-consecutive-second time interval. Six (6)-minute block averages shall be utilized for COMS data per the provisions of Appendix B to 40 CFR 60, Performance Specification 1, as specified in 10 CSR 10-6.030(22).

(BB) Smoke generating device—A specialized piece of equipment which is not an integral part of a commercial, industrial, or manufacturing process and whose sole purpose is the creation and dispersion of fine solid or liquid particles in a gaseous medium.

(CC) Springfield-Greene County area—The geographical area contained within Greene County.

(DD) St. Louis metropolitan area—The geographical area comprised of St. Louis, St. Charles, Jefferson, and Franklin counties and the City of St. Louis.

(EE) Visible emission—Any discharge of an air contaminant, including condensables, which reduces the transmission of light or obscures the view of an object in the background.

(3) General Provisions.

(B) Failure to meet the requirements of subsection (3)(A) solely because of the presence of uncombined water *[shall not be]* is not a violation of this rule.

[(D) The following emission units shall install a CMS in

accordance with subsection (3)(F) of this rule:

1. Unless exempt under section (1) of this rule, coal-fired steam generating units with maximum heat input rate greater than two hundred fifty (250) million British thermal units (Btus)/hour. Exemption: Coal-fired steam generating units that have an annual boiler capacity factor of thirty percent (30%) or less are exempt from this requirement; and

2. Portland cement calcining kiln operations.]

(D) Coal-fired steam generating units with maximum heat input rate greater than two hundred fifty (250) million British thermal units (Btus)/hour shall install a CMS in accordance with subsection (3)(F) of this rule unless the emission unit—

1. Is exempt under section (1) of this rule; or

2. Has an annual boiler capacity factor of thirty percent (30%) or less.

(F) Continuous Monitoring Requirements. Sources with emission units that are required to install a CMS must select one (1) of the following options:

1. Install, calibrate, and maintain a COMS according to the following conditions:

A. Source operating time includes any time fuel is being combusted and/or a fan is being operated;

B. Cycling time. Cycling times include the total time a monitoring system requires to sample, analyze, and record an emission measurement. Continuous monitoring systems for measuring opacity shall complete a minimum of one (1) cycle of operation (sampling, analyzing, and data recording) for each successive ten (10)-second period;

C. Certification. All COMS shall be certified by the director after review and acceptance of a demonstration of conformance with 40 CFR 60, Appendix B, Performance Specification 1, as specified in 10 CSR 10-6.030(22);

D. Audit authority. All COMS shall be subject to audits conducted by the department, and all COMS records shall be made available upon request to department personnel; or

2. Install, calibrate, and maintain an alternative CMS according to the following conditions:

A. All alternative CMS, monitoring systems requirements, system locations, reporting and record keeping requirements, and procedures for operation and maintenance must be approved by the staff director and the U.S. Environmental Protection Agency (EPA); and incorporated into this rule and the state implementation plan (SIP) prior to implementation;

B. Demonstrate that a requirement of paragraph (3)(F)1. or section (4) of this rule cannot be practically met; and

C. Demonstrate that the alternative CMS produces results that adequately verify compliance.

[(H) Time Schedule for Compliance.

1. All new emission units shall comply when operations begin; and

2. All existing emission units shall comply as of the effective date of this rule.]

(4) Reporting and Record Keeping.

(A) COMS Reporting. Owners or operators required to install COMS shall submit a quarterly written report to the director. All quarterly reports shall be postmarked no later than the thirtieth day following the end of each calendar quarter and *[shall]* include the following emissions data:

1. A summary including total time for each cause of excess emissions and/or monitor downtime;

2. Nature and cause of excess emissions, if known;

3. The six (6)-minute average opacity values greater than the opacity emission requirements (The average of the values shall be obtained by using the procedures specified in the Reference Method used to determine the opacity of the visible emissions);

4. The date and time identifying each period during which the COMS was inoperative (except for zero and span checks), including

the nature and frequency of system repairs or adjustments that were made during these times; and

5. If no excess emissions have occurred during the reporting period and the COMS has not been inoperative, repaired, or adjusted, this information shall be stated in the report.

(5) Test Methods.

(A) *[Qualified observer in accordance with 10 CSR 10-6.030(9)(A),]* Method 9—Visual Determination of the Opacity of Emissions from Stationary Sources of 40 CFR 60, Appendix A-4, as specified in 10 CSR 10-6.030(22).

(B) Photogrammetric opacity measurement in accordance with EPA Alternative Test Method Decision Letter Number ALT-082[—*Digital camera opacity technique*], dated May 15, 2012 as published by EPA and hereby incorporated by reference in this rule. Copies can be obtained from the Office of Air Quality Planning and Standards, Measurement Technology Group, Mail Drop: E143-02, Research Triangle Park, NC 27711. This rule does not incorporate any subsequent amendments or additions.

AUTHORITY: section 643.050, RSMo [Supp. 2013] 2016. Original rule filed March 31, 1999, effective Nov. 30, 1999. For intervening history, please consult the Code of State Regulations. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed amendment will begin at 9:00 a.m., September 27, 2018. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded to any interested person. Interested persons, whether or not heard, may submit a statement of their views until 5:00 p.m., October 4, 2018. Send online comments via the proposed rules web page www.dnr.mo.gov/proposed-rules, email comments to apcprulespn@dnr.mo.gov, or written comments to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 6—Air Quality Standards, Definitions, Sampling
and Reference Methods and Air Pollution Control
Regulations for the Entire State of Missouri**

PROPOSED AMENDMENT

10 CSR 10-6.261 Control of Sulfur Dioxide Emissions. The commission proposes to amend the purpose, subsections (1)(A), (4)(A) and (5)(A)–(5)(C), and section (3). If the commission adopts this rule action, the department intends to submit this rule action to the U.S. Environmental Protection Agency for inclusion in the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Proposed Rules website www.dnr.mo.gov/proposed-rules.

PURPOSE: This proposed rulemaking will remove all sources from the current Table I because the sulfur dioxide (SO₂) emission limits are included in other legally binding documents (e.g., Construction Permits, Consent Agreements, etc.) and/or emission limits are no longer necessary to comply with the 2010 1-hour SO₂ National Ambient Air Quality Standard (NAAQS). As a result, the current Table I will be removed in its entirety, and Table II will now be the new Table I. This proposed rulemaking will also add City Utilities of Springfield – James River Plant, to the new Table I list of affected SO₂ sources in the rule, codifying units #1 through #5 are using natural gas exclusively. An exemption will be added to subsection (1)(A) for units burning ultra low sulfur distillate fuel with a maximum fuel content of fifteen (15) parts per million (ppm). Subsection (3)(D) requiring sources in Jackson and Jefferson counties to use ultra-low sulfur distillate fuel oil will be eliminated since it is not required by a federally approved plan for nonattainment areas. The new Table I will be updated to more clearly state that only indirect heating units are subject to the table emission limits. The table in subsection (3)(C) will be replaced with a new table that specifies state areas and specific dates to clarify the terms “existing” and “new” in the old table, adding clarity by providing the necessary information in the table. Additionally, subsection (5)(A) will be revised to reference 10 CSR 10-6.030, offering a single location to determine applicable test methods. The evidence supporting the need for this proposed rulemaking, per 536.016, RSMo, is Executive Order 17-03 Red Tape Reduction Review and related comments.

*PURPOSE: This rule establishes requirements for emission units emitting sulfur dioxide (SO₂). These requirements [are necessary to comply with the one (1)-hour SO₂ National Ambient Air Quality Standard (NAAQS) and to] maintain existing SO₂ regulatory requirements previously found in 10 CSR 10-6.260 that were in place prior to the establishment of the **June 22, 2010, one (1)-hour SO₂ National Ambient Air Quality Standards (NAAQS)**. The rule consolidates, streamlines, and updates existing regulatory requirements in accordance with 536.175, RSMo. [The evidence supporting the need for this proposed rulemaking, per 536.016, RSMo, is a **June 22, 2010, Federal Register rule that established a new one (1)-hour SO₂ standard and an August 5, 2013, Federal Register rule that established one (1)-hour SO₂ nonattainment areas.**]*

(1) Applicability. This rule applies to any source that emits sulfur dioxide (SO₂). The following exceptions apply to any source not listed in Table I of this rule. Upon request of the director, owners or operators must furnish the director information to confirm that an exception criterion is met.

(A) Individual units fueled exclusively with natural gas (as defined in 40 CFR 72.2), liquefied petroleum gas as defined by American Society for Testing and Materials (ASTM) International, **ultra-low sulfur distillate fuel oil with a maximum fuel sulfur content of fifteen (15) ppm**, or any combination of these fuels as of December 31, 2016, **and this exception is determined by complying with the record keeping requirements in section (4) of this rule;**

(3) General Provisions.

(A) SO₂ Emission Limits. *[No later than January 1, 2017, o/Owners or operators of sources and/or units listed in Table I of this rule must limit their SO₂ emissions as specified. [As of the effective date of this rule, owners or operators of sources listed in Table II of this rule must limit their SO₂ emissions as specified.]*

[Table I – Sources with SO₂ emission limits necessary to address the one (1)-hour SO₂ National Ambient Air Quality Standard]*

<i>Source</i>	<i>Source ID</i>	<i>Emission Limit per Source/Unit (Pounds SO₂ per Hour)</i>	<i>Averaging Time</i>
<i>Ameren Missouri — Labadie Energy Center</i>	<i>0710003</i>	<i>40,837</i>	<i>24-hour block average</i>
<i>Ameren Missouri — Meramec Energy Center</i>	<i>1890010</i>	<i>7,371</i>	<i>24-hour block average</i>
<i>Ameren Missouri — Rush Island Energy Center</i>	<i>0990016</i>	<i>13,600</i>	<i>24-hour block average</i>
<i>Independence Power and Light — Blue Valley Station Unit 1 Unit 2 Unit 3</i>	<i>0950050</i>	<i>Natural gas Natural gas Natural gas</i>	<i>N.A. N.A. N.A.</i>
<i>Kansas City Power and Light Co. — Hawthorn Station Boiler #5 Combustion turbine 7 Combustion turbine 8 Combustion turbine 9</i>	<i>0950022</i>	<i>785 Natural gas Natural gas Natural gas</i>	<i>30-day rolling N.A. N.A. N.A.</i>
<i>Kansas City Power and Light Co. — Sibley Generating Station Boiler #1 Boiler #2 Boiler #3</i>	<i>0950031</i>	<i>1,468.17 1,447.01 10,632.02</i>	<i>30-day rolling 30-day rolling 30-day rolling</i>
<i>Veolia Energy Kansas City Inc. — Grand Ave. Station Boiler 1A Boiler 6 & 8 Boiler 7</i>	<i>0950021</i>	<i>0.5 351.8 0.5</i>	<i>1 hour 1 hour 1 hour</i>

**Any Table I source/unit fueled by coal, diesel, or fuel oil shall require an SO₂ Continuous Emission Monitoring System (CEMS) and owners or operators must follow all applicable requirements per subparagraph (3)(E)1.B. of this rule. Any source/unit that is fueled by natural gas (or changes fuels to natural gas no later than January 1, 2017) shall no longer require SO₂ CEMS for such units beginning with the completion date of the fuel change to natural gas.]*

Table [III] I – Sources subject to SO₂ emission limits [in place prior to 2010]

Source	Source ID	Emission Limit per Source (Pounds SO ₂ per Million Btus Actual Heat Input)*	Averaging Time
Associated Electric Coop, Inc. — Chamois Plant	1510002	6.7	3 hours
City Utilities of Springfield — James River Plant (Boilers #1 through #5)	0770005	Natural Gas	N.A.
Empire District Electric Company — Asbury Plant	0970001	12.0	3 hours
New Madrid Power Plant — Marston	1430004	10.0	3 hours
Thomas Hill Energy Center Power Division — Thomas Hill	1750001	8.0	3 hours
University of Missouri (MU) — Columbia Power Plant	0190004	8.0	3 hours
Kansas City Power and Light Co. — Montrose Generating Station	0830001	3.9	24 hours
Ameren Missouri — Sioux Plant	1830001	4.8	Daily average, 00:01 to 24:00
Doe Run Company — Buick Resource Recycling Facility	0930009	8,650 pounds SO ₂ /hr	1-hour test repeated 3 times

**Applies to indirect heating units only.*

(B) Owners or operators of indirect heating sources with a total capacity, excluding exempt units, greater than three hundred fifty thousand British thermal units (350,000 Btus) per hour actual heat input must limit their SO₂ emissions as follows:

1. For sources located in Missouri, other than in Franklin, Jefferson, St. Louis, St. Charles Counties, or City of St. Louis, no more than eight pounds (8 lbs.) of SO₂ per million Btus actual heat input averaged on any consecutive three (3)-hour time period unless that source is listed in Table I [or III] of this rule; and

2. For sources located in Franklin, Jefferson, St. Louis, St. Charles Counties, or City of St. Louis, no more than two and three-tenths pounds (2.3 lbs.) of SO₂ per million Btus actual heat input averaged on any consecutive three (3)-hour time period unless—

A. The source is listed in Table I [or III] of this rule; or

B. The source has a total rated capacity of less than two thousand (2,000) million Btus per hour and then the following restrictions apply.

(I) During the months of October, November, December, January, February, and March of every year, no person shall burn or permit the burning of any coal containing more than two percent (2%) sulfur or of any fuel oil containing more than two percent (2%) sulfur. Otherwise, no person shall burn or permit the burning of any coal or fuel oil containing more than four percent (4%) sulfur.

(II) Part (3)(B)2.B.(I) of this rule [shall] does not apply to any source if it can be shown that emissions of SO₂ from the source into the atmosphere will not exceed two and three-tenths pounds (2.3 lbs.) per million Btus actual heat input to the source.

(C) Owners or operators of sources and units not covered under subsection (3)(A) or (3)(B) of this rule must limit the fuel sulfur content as specified below.

[Source or unit]	Liquid fuel sulfur content in parts per million (ppm) sulfur	
	Residual	Distillate
New	8,509	8,812
Existing	34,036	35,249]

Area of State	Source or unit construction date	Liquid fuel sulfur content in parts per million (ppm) sulfur	
		Residual	Distillate
All	Began after the dates directly below in this table	8,509	8,812
Kansas City Metropolitan Area	Began on or before September 28, 1968	34,036	35,249
St. Louis Metropolitan Area	Began on or before March 24, 1967		
Springfield-Greene County Area	Began on or before September 24, 1971		
Outstate Area	Began on or before February 24, 1971		

[(D)] No later than January 1, 2017, owners or operators of sources subject to this rule in Jackson and Jefferson Counties must accept for delivery only ultra-low sulfur distillate fuel oil with a maximum fuel sulfur content of fifteen (15) ppm for use in unit(s) fueled, in whole or in part, by diesel, No. 1 fuel oil and/or No. 2 fuel oil.]

[(E)](D) Compliance Determination. Compliance must be determined as follows:

1. For sources and/or units listed in Table I of this rule, already subject to an SO₂ Continuous Emission Monitoring System (CEMS) requirement, SO₂ CEMS data.; and

A. SO₂ CEMS are not required for the following cases:

(I) Units fueled exclusively by natural gas and not using any secondary fuel; or

(II) Units fueled by natural gas and only using fuel oil for less than forty-eight (48) hours annually and only for qualifying situations (e.g., testing, maintenance, or operator training). The forty-eight (48)-hour annual limit for the use of fuel oil as a secondary fuel [shall] does not include qualifying curtailment events and compliance must be demonstrated using paragraph [(3)/(D)3.] (3)(D)2. of this rule;

B. SO₂ CEMS must follow the requirements in [40 CFR 75 and/or 40 CFR 60, Appendices B and F, as incorporated by reference in] subsection (5)(B) of this rule;

[2. For sources listed in Table II of this rule already subject to a SO₂ CEMS requirement, SO₂ CEMS data; and]

[3.]2. For sources subject to subsection (3)(B) or (3)(C) of this rule not required to use SO₂ CEMS for compliance and for sources listed in Table III I of this rule not required to use SO₂ CEMS for compliance—

A. Fuel delivery records;

B. Fuel sampling and analysis;

C. Performance tests;

D. Continuous emission monitoring; or

E. Other compliance methods approved by the staff director and the U.S. Environmental Protection Agency and incorporated into the state implementation plan.

(4) Reporting and Record Keeping.

(A) Owners or operators of all sources subject to this rule must—

1. Report any excess emissions other than startup, shutdown, and malfunction excess emissions already required to be reported under 10 CSR 10-6.050 to the staff director for each calendar quarter within thirty (30) days following the end of the quarter. In all cases, the notification must be a written report and [must] include, at a minimum, the following:

A. Name and location of source;

B. Name and telephone number of person responsible for the source;

C. Identity and description of the equipment involved;

D. Time and duration of the period of SO₂ excess emissions;

E. Type of activity;

F. Estimate of the magnitude of the SO₂ excess emissions expressed in the units of the applicable emission control regulation and the operating data and calculations used in estimating the magnitude;

G. Measures taken to mitigate the extent and duration of the SO₂ excess emissions; and

H. Measures taken to remedy the situation which caused the SO₂ excess emissions and the measures taken or planned to prevent the recurrence of these situations;

2. Maintain a list of modifications to the source's operating procedures or other routine procedures instituted to prevent or minimize the occurrence of any excess SO₂ emissions;

3. Maintain a record of data, calculations, results, records, and reports from any SO₂ emissions performance test, SO₂ continuous emission monitoring, fuel deliveries, and/or fuel sampling tests; and

4. Maintain a record of any applicable SO₂ monitoring data, performance evaluations, calibration checks, monitoring system and device performance tests, and any adjustments and maintenance performed on these systems or devices.

(5) Test Methods.

(A) Owners or operators of sources must use one (1) or more of the following 40 CFR 60 test methods [contained in 40 CFR 60, Appendix A, published as of July 1, 2014, and hereby incorporated by reference in this rule, as published by the Office of the Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, DC 20408, to determine compliance with SO₂ emission limits in this rule. This rule does not incorporate any subsequent amendments or additions.] as specified in 10 CSR 10-6.030(22):

1. Method 1: Sample and velocity traverses for stationary sources;

2. Method 2: Determination of stack gas velocity and volumetric flow rate (Type S pitot tube);

3. Method 3: Gas analysis for the determination of dry molecular weight;

4. Method 4: Determination of moisture content in stack gases;

5. Method 6: Determination of Sulfur Dioxide Emissions from Stationary Sources;

6. Method 6A: Determination of Sulfur Dioxide, Moisture, and Carbon Dioxide from Fuel Combustion Sources;

7. Method 6B: Determination of Sulfur Dioxide and Carbon Dioxide Daily Average Emissions from Fossil Fuel Combustion Sources;

8. Method 6C: Determination of Sulfur Dioxide Emissions from Stationary Sources (Instrumental Analyzer Procedure); and/or]

9. Method 8: Determination of sulfuric acid mist and sulfur dioxide emissions from stationary sources.

(B) Owners or operators of sources using an SO₂ CEMS for demonstrating compliance with this rule must follow the requirements in 40

CFR 75 and/or 40 CFR 60, Appendices B and F, published as of July 1, 2014, which are hereby incorporated by reference in this rule, as published by the Office of the Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, DC 20408. This rule does not incorporate any subsequent amendments or additions]. **40 CFR 75 promulgated as of June 30, 2018 is hereby incorporated by reference in this rule, as published by the Office of the Federal Register. Copies can be obtained from the U.S. Publishing Office Bookstore, 710 N. Capitol Street NW, Washington, DC 20401. This rule does not incorporate any subsequent amendments or additions. 40 CFR 60, Appendices B and F are as specified in 10 CSR 10-6.030(22).**

(C) Owners or operators of secondary lead smelters must operate an SO₂ CEMS as follows:

1. The SO₂ CEMS must be certified by the owner or operator in accordance with 40 CFR 60 Appendix B, Performance Specification 2 and Section 60.13 as specified in **10 CSR 10-6.030(22)** as is pertinent to SO₂ continuous emission monitors as adopted by reference in 10 CSR 10-6.070.

2. The span of SO₂ continuous emission monitors must be set at an SO₂ concentration of one-fifth percent (0.20%) by volume.

AUTHORITY: section 643.050, RSMo [Supp. 2013] 2016. Original rule filed April 10, 2015, effective Nov. 30, 2015. Amended: Filed June 21, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed amendment will begin at 9:00 a.m., September 27, 2018. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded to any interested person. Interested persons, whether or not heard, may submit a statement of their views until 5:00 p.m., October 4, 2018. Send online comments via the proposed rules web page www.dnr.mo.gov/proposed-rules, email comments to apcprulespn@dnr.mo.gov, or written comments to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176.

Title 10—DEPARTMENT OF NATURAL RESOURCES

Division 10—Air Conservation Commission

Chapter 6—Air Quality Standards, Definitions, Sampling and Reference Methods and Air Pollution Control Regulations for the Entire State of Missouri

PROPOSED AMENDMENT

10 CSR 10-6.330 Restriction of Emissions From Batch-Type Charcoal Kilns. The commission proposes to amend subsections (1)(B), (2)(A)–(2)(E), (3)(A), (3)(B), (3)(D)–(3)(F), (4)(A) and (4)(B); renumber and amend existing subsections (2)(F)–(2)(J); add new subsections (2)(G) and (2)(L); delete existing subsections (2)(K) and (3)(G); and amend section (5). If the commission adopts this rule action, the department intends to submit this rule amendment to the U.S. Environmental Protection Agency to replace the current rule that is in the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution

Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Proposed Rules website www.dnr.mo.gov/proposed-rules.

PURPOSE: This regulation establishes emission limits for batch-type charcoal kilns based on operational parameters that reflect the Best Available Control Technology (BACT) for this industry as of August 20, 1997. The purpose of this rulemaking is to comply with Executive Order 17-03 criteria. This amendment will remove obsolete requirements which applied during the phase-in period of this rule that ended December 31, 2005. The rule language will be clarified by consolidating related provisions currently published in separate areas of the rule, removing the unnecessary use of restrictive words, adding definitions specific to this rule, updating references to test methods, and making other minor edits. The evidence supporting the need for this proposed rulemaking, per 536.016, RSMo, is Executive Order 17-03 and related comments.

(1) Applicability.

(B) In the event that other rules in the *Code of State Regulations* are also applicable to batch-type charcoal kilns, the more stringent rule requirement *[shall apply]* applies.

(2) Definitions.

(A) *["Batch-type charcoal kiln"]*—Charcoal kilns that manufacture charcoal with a batch process rather than a continuous process. The batch-type charcoal kiln process typically includes loading wood, sealing the kiln, igniting the wood, and controlled burning of the wood to produce charcoal which is unloaded.

(B) *["Burn cycle"]*—The burn cycle for a charcoal kiln begins at the time that a batch of wood is initially lit and ends when the burn for that batch is completed and the kiln is sealed. The burn cycle does not include cool down time.

(C) *["Charcoal kiln"]*—Any closed structure used to produce charcoal by controlled burning (pyrolysis) of wood. Retorts and furnaces used for charcoal production are not charcoal kilns.

(D) *["Charcoal kiln control system"]*—A combination of an emission control device and connected charcoal kiln(s).

(E) *["Emission control device"]*—Any device used to reduce contaminant emissions into the air. Thermal oxidizers or afterburners are often used on charcoal kilns for burning exhaust gases to reduce particulate matter, carbon monoxide, and volatile organic compound emissions.

(F) **Facility**—All contiguous or adjoining property that is under common ownership or control, including properties that are separated only by a road or other public right-of-way.

[(F)](G) ["Fill capacity"]—The maximum amount of wood that can be properly loaded into a charcoal kiln prior to the burn cycle.

[(G)](H) ["Opacity"]—The extent to which airborne material obstructs the transmission of incident light and obscures the visual background. Opacity is stated as a percentage of light obstructed and can be measured by a continuous opacity monitoring system or a trained observer. An opacity of one hundred percent (100%) represents a condition in which no light is transmitted and the background is completely obscured.

[(H)](I) ["Particulate matter"]—Particulate matter emissions from charcoal kilns and charcoal kiln control systems *[shall]* consist of all particulate matter including condensibles.

[(I)](J) ["Residence time"]—Period of time in which gas in a thermal oxidizer, incinerator, or afterburner is exposed to heat and oxygen at a specified temperature in order to destroy pollutants present in the gas.

[(J)](K) ["Treated wood"]—Wood that has been subjected to a chemical process or application.

[(K) Definitions of certain terms specified in this rule, other than those specified in this rule section, may be found in 10 CSR 10-6.020.]

(L) Volatile organic compounds (VOCs)—Volatile organic compound (VOC)—Any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions. This includes any such organic compound other than those listed in 40 CFR 51.100(s)(1) as specified in 10 CSR 10-6.030(21).

(3) General Provisions.

(A) Restriction of Emissions.

1. No charcoal kiln control system shall emit visible emissions greater than ten percent (10%) opacity.

2. No charcoal kiln control system shall emit more than the following emissions:

A. 1.5 pounds per hour of particulate matter;

B. Either 0.24 pounds per hour volatile organic compounds (VOCs) or the emission rate equivalent to ninety-nine percent (99%) VOC control efficiency, whichever results in a lower emission rate; and

C. 1.75 pounds per hour of carbon monoxide (CO).

3. Charcoal kiln control systems shall be maintained to assure that no visible fugitive emissions result from equipment cracks or door seals.

[4. Fugitive dust from other operations at charcoal manufacturing installations (such as charcoal handling, vehicle haul roads, crushing, screening, etc.) shall comply with the requirements of 10 CSR 10-6.170 Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin.]

(B) Operating Requirements.

1. No charcoal kiln shall be operated without an emission control device installed and operated to meet the requirements of this rule and other applicable state and federal rules.

2. Each emission control device shall have a sight glass **or other viewing portal** installed in the burning chamber such that the burn can be visually monitored.

3. All charcoal kiln emissions shall be ducted to an operating emission control device throughout the entire burn cycle.

4. Emission control devices shall be equipped with automatic temperature control systems which are set such that gas streams are heated and maintained *[at a nominal operating temperature of sixteen hundred degrees Fahrenheit (1600 °F), with a fifteen hundred twenty degree Fahrenheit (1520 °F) minimum temperature allowed, for a minimum residence time of 1.7 seconds.]* according to one (1) the following sets of conditions:

A. At a nominal operating temperature of sixteen hundred degrees Fahrenheit (1600 °F), with a fifteen hundred twenty degree Fahrenheit (1520 °F) minimum temperature allowed, for a minimum residence time of 1.7 seconds; or

B. At an alternative operating temperature and residence time determined by performance testing, during which the following conditions are met:

(I) All emission limit requirements of paragraphs (3)(A)1. and 2. of this rule are met;

(II) The CO control efficiency is greater than or equal to ninety-nine percent (99%); and

(III) The department has validated the performance test results that the alternative operating temperature and residence time are based on. The operating requirements in subparagraph (3)(B)4.A. of this rule apply until these performance test results have been validated.

5. All charcoal kiln control systems shall be operated using the same fuel(s) as used during performance testing.

6. No charcoal kiln shall burn treated wood at any time.

7. Rule 10 CSR 10-6.050 Startup, Shutdown, and Malfunction Conditions shall only be applicable to charcoal kiln control systems with regard to the malfunction provision, and not with regard to start-up and shutdown.

8. All charcoal kiln control systems shall be operated and main-

tained in accordance with the department approved standard operating procedures manual described in subsection (3)(D) of this rule and the department approved maintenance practices manual described in subsection (3)(E) of this rule.

9. All charcoal kiln control systems that have been performance tested shall continuously display and record the emission control device operating temperature with the permanently installed temperature recording device at all times of operation.

(D) The owner or operator of charcoal kilns at charcoal manufacturing *[installations]* facilities shall develop, submit for department approval, and establish a standard operating procedures manual for each charcoal manufacturing *[installation]* facility. At a minimum, this manual shall describe—

1. Safe charcoal kiln operation;

2. Bundle stacking (including adequate platform of logs to enhance combustion);

3. Use of properly seasoned wood (cover mixing of wood species, if applicable);

4. Control of fugitive emissions from each charcoal kiln (e.g. “mudding” cracks and doors) and each emission control device; and

5. Methods of reporting and recordkeeping *[required by]* under section (4) of this rule.

(E) The owner or operator of charcoal kilns shall develop, submit for department approval, and establish a maintenance practices manual for each charcoal kiln control system. This manual shall be maintained at each site for the specific emission control device(s) installed at the site. At a minimum, this manual shall include:

1. Maintenance of all equipment (e.g. proper cleaning of inlet ports);

2. Measures taken in the event of emission control device failure to minimize emissions (e.g. opening kiln caps and air vents to allow kiln wood to burn down to minimize smoking conditions or shutting all kiln inlets and outlets until all combustion in the chamber is extinguished);

3. Inspections performed and frequency (e.g. daily burner operation); and

4. Methods of reporting and recordkeeping *[required by]* under section (4) of this rule.

(F) Performance Testing and Compliance Determinations.

1. For compliance determination, each charcoal kiln control system shall be evaluated as a unit and performance tested for compliance with the emission limit requirements of paragraphs (3)(A)1. and 2. of this rule.

2. All charcoal kiln control system performance tests shall be conducted with each charcoal kiln of the system filled to at least ninety percent (90%) of fill capacity and at the midpoint of burn cycle unless otherwise noted. The midpoint of each charcoal kiln burn cycle shall be no less than forty percent (40%), and no more than sixty percent (60%) of the total burn cycle.

3. Emission control device fuel type(s) and quantity(ies) used during the performance test shall be recorded.

4. All performance test operating temperatures shall be recorded with a continuous recording device that is permanently installed, and the temperature shall be continuously displayed and recorded throughout the entire performance test.

5. Each performance test shall consist of a minimum of three (3) runs for each pollutant specified in paragraph (3)(A)2. of this rule and *[shall be]* conducted using the test methods specified in section (5) of this rule. The duration of *[E]*each test run shall be one (1) hour unless the test method requires a longer duration. Compliance shall not be considered demonstrated until the department has validated performance test results.

6. Compliance determinations for visible fugitive emission requirements of this rule shall use the test method specified in subsection (5)(E) of this rule.

7. The director may allow similar charcoal kiln control system units to operate without the individual performance tests required by paragraph (3)(F)1. if the following conditions are met:

A. Similar units have the same number of charcoal kilns, [the same] **similar** construction, capacities within ten percent (10%) of each other, and [the same] **similar** design;

B. Similar units are controlled by emission control devices with the same construction, the same size, and the same design; and

C. Three (3) separate similar units have successfully demonstrated compliance with the emission limit requirements of paragraphs (3)(A)1. and 2. of this rule.

[8. The director may allow a specific charcoal kiln control system to operate at a temperature lower than the paragraph (3)(B)4. temperature requirement of this rule if the owner or operator successfully demonstrates by performance test that the following conditions are met:

A. All emission limit requirements of paragraphs (3)(A)1. and 2. of this rule are met; and

B. The CO control efficiency is greater than or equal to ninety-nine percent (99%).]

[9.]8. Control efficiency (CE) shall be calculated from performance test data using the following calculation:

$$CE = \left(1 - \frac{\text{Outlet Emission Rate}}{\text{Inlet Emission Rate}} \right) \times 100$$

[10. The owner or operator of a charcoal kiln shall be allowed a period of one hundred eighty (180) days from the first time combustion occurs in the emission control device to get the charcoal kiln control system operating in compliance with this rule. Combustion in the emission control device of a charcoal kiln shall occur no later than December 31 of the applicable compliance year established in subsection (3)(G) of this rule. During this one hundred eighty (180)-day period, deviations from the emission limit and operating requirements of this rule shall not be considered violations subject to enforcement.

11. If any existing emission control device installed or fabricated prior to the effective date of this rule does not meet the requirements of this rule, the emission control device will be modified or replaced such that requirements of this rule are met no later than eighteen (18) months after the effective date of this rule. Accelerated time constraints established by the Environmental Protection Agency (EPA) Final Consolidated Consent Agreement and Consent Order dated September 30, 1997, take precedence over this requirement.

12. Any owner or operator may shut down existing charcoal kilns reported as active rather than installing required emission control devices. If the owner or operator subsequently decides to reactivate charcoal kilns, the charcoal manufacturing installation must have required emission control devices in operation on those kilns, prior to activation and the owner or operator must notify the department at least thirty (30) days prior to reactivation.

13. Charcoal kilns that were not reported as active, cannot be reactivated without required emission control devices installed. Any emission control device installed per subsection (3)(F) of this rule does not count towards the schedule for emission control devices in subsection (3)(G) of this rule.]

[14.]9. Any existing charcoal kiln that has been inactive for sixty (60) months or longer shall comply with all federal and state rules, and obtain a construction permit prior to reactivation.

[(G) Compliance Schedule.

1. For each charcoal manufacturing installation owned or operated, each owner or operator shall install an emission control device to meet the requirements of this rule on a minimum of two (2) active charcoal kilns by December 31, 1998. Accelerated compliance schedules established by the Environmental Protection Agency (EPA) Final Consolidated

Consent Agreement and Consent Order dated September 30, 1997, take precedence over this requirement.

2. After December 31, 1998, each owner or operator shall install an emission control device to meet the requirements of this rule on remaining active charcoal kilns at the rate of a minimum of two (2) charcoal kilns per charcoal manufacturing installation per calendar year by December 31 of each year. All emission control devices must be installed no later than December 31, 2005. Accelerated compliance schedules established by the Environmental Protection Agency (EPA) Final Consolidated Consent Agreement and Consent Order dated September 30, 1997, take precedence over this requirement. An owner or operator can install emission control devices early without accelerating the schedule for installation of control devices contained in this paragraph.

3. The standard operating procedures manual and maintenance practices manual described in subsection (3)(D) and (3)(E) of this rule shall be developed and submitted to the department for approval no later than December 31, 1998.

4. All new charcoal kilns shall comply with all federal and state rules and obtain all necessary permits prior to operation.]

(4) Reporting and Record Keeping.

(A) Owners or operators of all charcoal kilns shall maintain a file on each active charcoal kiln with the following information for a minimum of five (5) years from the date the data was collected:

1. Average annual production (tons of charcoal per charcoal manufacturing [installation] facility per year divided by the number of charcoal kilns at the charcoal manufacturing [installation] facility);

2. Start-up time (hour and minute) for each burn cycle;

3. Emission control device temperature (in degrees Fahrenheit) throughout each burn cycle shall be measured at a point in the emission control device where gas residence time is no less than [1.7 seconds] the applicable residence time under paragraph (3)(B)4. of this rule;

4. The emission control device temperature shall be continuously displayed and recorded by a continuous recording device[. (For twelve months after the effective date of this rule, manual recording of the emission control device temperature every fifteen (15) minutes shall be allowed for charcoal kiln control systems that are not performance tested)];

5. Daily log for each charcoal kiln control system that includes start-up time(s), cool-down time(s), re-light time(s), and inspections performed (e.g. burn chamber);

6. Monthly log for each charcoal kiln control system that includes fuel usage and, where more than one (1) type of fuel is used, fuel types and times of usage;

7. Malfunction log for each charcoal manufacturing [installation] facility that includes a description of each malfunction cause, duration, and actions taken to remedy the malfunction; and

8. Performance test reports for all emission control devices tested.

(B) [No later than thirty (30) days after the effective date of this rule, o]Owners or operators of all charcoal kilns shall provide the department with a list of the identification numbers of active charcoal kilns at each location [at the time this rule becomes effective]. If the active status of any charcoal kiln changes, including the construction of new charcoal kilns, the owner or operator shall provide an updated list to the department no later than thirty (30) days after the status change.

(5) Test Methods.

(A) Particulate matter emission level testing shall include condensibles and use the following methods as specified in 10 CSR 10-6.030(22):

1. [10 CSR 10-6.030(1), Reference] Method 1—Sample and Velocity Traverses for Stationary Sources;

2. [10 CSR 10-6.030(2), Reference] Method 2—Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube);

3. [10 CSR 10-6.030(3), Reference] Method 3—Gas Analysis for Carbon Dioxide, Excess Air and Dry Molecular Weight;

4. [10 CSR 10-6.030(4), Reference] Method 4—Determination of Moisture in Gases;

5. [10 CSR 10-6.030(5)(A), Reference] Method 5—Determination of Particulate Emissions from Stationary Sources; and

6. [40 CFR part 51, Appendix M—Recommended Test Methods For State Implementation Plans, Method 202—Determination of Condensible Particulate Emissions from Stationary Sources] Method 202—Determination of Condensible Particulate Emissions from Stationary Sources of 40 CFR 51, Appendix M as specified in 10 CSR 10-6.030(21).

(B) VOC emission level testing shall use one (1) of the following methods as specified by 40 CFR part 60, Appendix A—Reference Methods:

1. [Method 18—Measurement of Gaseous Organic Compound Emissions by Gas Chromatography] Method 18—Measurement of Gaseous Organic Compound Emissions by Gas Chromatography; or

2. [Method 25A—Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer] Method 25A—Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer.

(C) CO emission level testing shall use [10 CSR 10-6.030(10), Reference] Method 10—Determination of Carbon Monoxide Emissions from Stationary Sources as specified in 10 CSR 10-6.030(22).

(D) Emissions percent opacity testing shall use [10 CSR 10-6.030(9), Reference] Method 9—Visual Determination of the Opacity of Emissions from Stationary Sources as specified in 10 CSR 10-6.030(22).

(E) Visible fugitive emissions testing shall use [Method 22—Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares] Method 22—Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares as specified [by 40 CFR part 60, Appendix A—Reference Methods] in 10 CSR 10-6.030(22).

AUTHORITY: sections 643.030, **643.050**, 643.075, and 643.078, RSMo [1994 and 643.050, RSMo Supp. 1997] **2016**. Original rule filed Nov. 25, 1997, effective July 30, 1998. Amended: Filed June 21, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed amendment will begin at 9:00 a.m., September 27, 2018. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded to any interested person. Interested persons, whether or not heard, may submit a statement of their views until 5:00 p.m., October 4, 2018. Send online comments via the proposed rules web page www.dnr.mo.gov/proposed-rules, email comments to apcprulespn@dnr.mo.gov, or written comments to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 6—Air Quality Standards, Definitions, Sampling
and Reference Methods and Air Pollution Control
Regulations for the Entire State of Missouri

PROPOSED AMENDMENT

10 CSR 10-6.372 Cross-State Air Pollution Rule NO_x Annual [NO_x] Trading [Allowance Allocations] Program. The commission proposes to amend the title, purpose, sections (1), (3), and (4) and subsection (2)(A). If the commission adopts this rule action, the department intends to submit this rule amendment to the U.S. Environmental Protection Agency to replace the current rule that is in the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Proposed Rules website www.dnr.mo.gov/proposed-rules.

PURPOSE: The purpose of this rulemaking is to comply with Executive Order 17-03 criteria and will remove the unnecessary use of restrictive words, update incorporations by reference, and add definitions specific to this rule. This amendment will also fully transfer responsibility for the Cross-State Air Pollution Rule (CSAPR) Annual Nitrogen Oxide (NO_x) Trading Program requirements to Missouri rather than keeping Missouri subject to a partial Federal Implementation Plan (FIP). The evidence supporting the need for this proposed rulemaking, per 536.016, RSMo, is **Federal Register** Notice dated October 26, 2016 (81 FR 74504); and Executive Order 17-03 Red Tape Reduction Review and related comments.

PURPOSE: The purpose of this rule is to [reallocate annual nitrogen oxides (NO_x) emission allowances for use with the U.S. Environmental Protection Agency's (EPA's) annual NO_x regional emission reduction program as established in the federal Cross-State Air Pollution Rule (CSAPR) for 2017 and beyond. The federal CSAPR program will continue to be administered by EPA. The state rule only redistributes annual NO_x allowances.] have Missouri responsible for the Cross-State Air Pollution Rule (CSAPR) Nitrogen Oxide (NO_x) Annual Trading Program rather than the U.S. Environmental Protection Agency. This rule also provides the process to allocate allowances to affected units in Missouri for compliance with the CSAPR NO_x Annual Trading Program. The evidence supporting the need for this [proposed rulemaking] rule, per section 536.016, RSMo, is the September 13, 2011, December 16, 2014, [and] March 24, 2015, and February 8, 2018 affected industry meeting summaries [indicating general agreement to reallocate unused NO_x allowances to municipalities that received zero (0) allowances].

(1) Applicability. [This rule applies to all Transport Rule (TR) nitrogen oxides (NO_x) Annual units located in the state of Missouri.]

(A) Unless otherwise noted in subsection (1)(B) of this rule, the provisions of 40 CFR 97.402 through 40 CFR 97.435 promulgated as of July 1, 2018 are hereby incorporated by reference as published by the Office of the Federal Register. Copies can be obtained from the U.S. Publishing Office Bookstore, 710 N. Capitol Street NW, Washington, DC 20401. This rule does not incorporate any subsequent amendments or additions.

(B) Exceptions to subsection (1)(A) of this rule are as follows:

1. The following provisions are not adopted by reference in subsection (1)(A) of this rule, and instead are replaced by section (3) of this rule:

A. 40 CFR 97.411(a);

B. 40 CFR 97.411(b)(1); and

C. 40 CFR 97.412(a).

2. The following provisions are not adopted by reference in subsection (1)(A) of this rule, nor are they replaced by any provisions in this rule:

A. Any of the requirements imposed on any unit in Indian country within the borders of any state in the provisions of 40 CFR 97.402 through 40 CFR 97.435;

B. 40 CFR 97.411(b)(2);

C. 40 CFR 97.411(c)(5)(iii);

D. 40 CFR 97.412(b);

E. 40 CFR 97.421(h); and

F. 40 CFR 97.421(j).

(2) Definitions.

(A) Definitions for key words and phrases used in this rule may be found in 40 CFR 97.402 and 40 CFR 97.403 *[promulgated as of July 1, 2014, and Federal Register Notice 79 FR 71663 promulgated on December 3, 2014, are hereby incorporated by reference as published by the Office of the Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, D.C. 20408], as incorporated by reference in subsection (1)(A) of this rule.*

(3) General Provisions. The general provisions for the Cross-State Air Pollution Rule (CSAPR) Nitrogen Oxide (NO_x) Annual Trading Program may be found in 40 CFR 97.404 through 40 CFR 97.428, which, unless listed in subsection (1)(B) of this rule, are incorporated by reference in subsection (1)(A) of this rule. Subsections (3)(A) and (3)(B) of [T/]this rule replace/s/ the provisions of 40 [Code of Federal Regulations (CFR)] 97.411(a), 40 CFR 97.411(b)(1) and 40 CFR 97.412(a) [promulgated as of June 30, 2014, and Federal Register Notice 79 FR 71663 promulgated on December 3, 2014, as published by the Office of the Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, D.C. 20408] as incorporated by reference in subsection (1)(A) of this rule.

(A) Existing Units.

1. Annual Submittal. The director must submit to the U.S. Environmental Protection Agency (EPA), in a format prescribed by the administrator, the [TR] CSAPR NO_x Annual allowances listed in Table I taking into account any modifications necessary in accordance with paragraph (3)(A)2. of this rule. This submittal must meet the following schedule:

A. By June 1, 2016, the director will submit to EPA allowances for [TR] CSAPR NO_x Annual units for the control periods in 2017 and 2018;

B. By June 1, 2017, the director will submit to EPA allowances for [TR] CSAPR NO_x Annual units for the control periods in 2019 and 2020;

C. By June 1, 2018, the director will submit to EPA allowances for [TR] CSAPR NO_x Annual units for the control periods in 2021 and 2022; and

D. By June 1, 2019, and June 1 of each year thereafter, the director will submit to EPA allowances for [TR] CSAPR NO_x Annual units for the control periods in the fourth year after the year in which the submission is made.

2. Non-Operating Units. If a unit in Table I of this rule does not operate during two (2) consecutive control periods after 2014, the submittal made under paragraph (3)(A)1. of this rule will show zero (0) [TR Annual] CSAPR NO_x Annual allowances for such unit for the control period in the fifth year after these two (2) such years and in each year after that fifth year. All [TR] CSAPR NO_x Annual allowances that would otherwise have been allocated to such unit will be allocated to the new unit set-aside for the state for the respective years involved. If this subsection is applicable, any resulting changes to the submittal under paragraph (3)(A)1. of this rule will be deter-

mined in accordance with the following:

A. Every year, the director will review the operation of each unit listed in Table I and issue a notification that lists any unit in Table I that has not operated during two (2) consecutive control periods after 2014. Any notification made under this subparagraph will specify the first year in which allowances listed in Table I will be terminated for the applicable unit(s) under paragraph (3)(A)2. of this rule;

B. For each notification *[required]* in subparagraph (3)(A)2.A. of this rule, the director will provide an opportunity for submission of objections to the units referenced in such notice that must be submitted by the deadline specified in such notification in order to be considered; and

C. If there are objections, the director will review them and issue a notification responding to objections received along with any adjustments made to the list.

Table I

Source Name	Source ID	Unit ID	[TR] CSAPR NO _x Annual unit allowances (tons) for 2017 and thereafter
Asbury	2076	1	884
Audrain Power Plant	55234	CT1	2
Audrain Power Plant	55234	CT2	2
Audrain Power Plant	55234	CT3	2
Audrain Power Plant	55234	CT4	2
Audrain Power Plant	55234	CT5	1
Audrain Power Plant	55234	CT6	1
Audrain Power Plant	55234	CT7	1
Audrain Power Plant	55234	CT8	1
Blue Valley	2132	3	126
Chamois Power Plant	2169	2	248
Chillicothe	2122	GT1A	2
Chillicothe	2122	GT1B	0
Chillicothe	2122	GT2A	0
Chillicothe	2122	GT2B	0
Columbia	2123	6	22
Columbia	2123	7	60
Columbia	2123	8	0
Columbia Energy Center (MO)	55447	CT01	1
Columbia Energy Center (MO)	55447	CT02	2
Columbia Energy Center (MO)	55447	CT03	1
Columbia Energy Center (MO)	55447	CT04	1
Dogwood Energy Facility	55178	CT-1	33
Dogwood Energy Facility	55178	CT-2	30
Empire District Elec Co Energy Ctr	6223	1	1
Empire District Elec Co Energy Ctr	6223	2	2
Empire District Elec Co Energy Ctr	6223	3A	11
Empire District Elec Co Energy Ctr	6223	3B	11
Empire District Elec Co Energy Ctr	6223	4A	12
Empire District Elec Co Energy Ctr	6223	4B	12
Essex Power Plant	7749	1	8
Fairgrounds	2082	CT01	0
Greenwood Energy Center	6074	1	6
Greenwood Energy Center	6074	2	4
Greenwood Energy Center	6074	3	6
Greenwood Energy Center	6074	4	8
Hawthorn	2079	5A	2,445
Hawthorn	2079	6	1
Hawthorn	2079	7	7
Hawthorn	2079	8	8
Hawthorn	2079	9	21
Higginsville Municipal Power Plant	2131	4A	2
Higginsville Municipal Power Plant	2131	4B	0
Holden Power Plant	7848	1	5
Holden Power Plant	7848	2	6
Holden Power Plant	7848	3	5
Howard Bend	2102	CT1A	0
Howard Bend	2102	CT1B	0

Iatan	6065	1	3,094
James River	2161	GT1	7
James River	2161	GT2	13
James River	2161	3	207
James River	2161	4	235
James River	2161	5	435
John Twitty Energy Center	6195	1	801
John Twitty Energy Center	6195	CT1A	1
John Twitty Energy Center	6195	CT1B	1
John Twitty Energy Center	6195	CT2A	1
John Twitty Energy Center	6195	CT2B	1
Labadie	2103	1	2,321
Labadie	2103	2	2,495
Labadie	2103	3	2,677
Labadie	2103	4	2,613
Lake Road	2098	6	414
Lake Road	2098	GT5	2
McCartney Generating Station	7903	MGS1A	10
McCartney Generating Station	7903	MGS1B	10
McCartney Generating Station	7903	MGS2A	10
McCartney Generating Station	7903	MGS2B	10
Meramec	2104	1	646
Meramec	2104	2	609
Meramec	2104	3	1,075
Meramec	2104	4	1,499
Meramec	2104	CT01	0
Meramec	2104	CT2A	0
Meramec	2104	CT2B	0
Mexico	6650	CT01	0
Moberly	6651	CT01	0
Montrose	2080	1	725
Montrose	2080	2	710
Montrose	2080	3	746
Moreau	6652	CT01	0
New Madrid Power Plant	2167	1	2,276
New Madrid Power Plant	2167	2	2,172
Nodaway Power Plant	7754	1	4
Nodaway Power Plant	7754	2	5
Northeast Generating Station	2081	11	0
Northeast Generating Station	2081	12	0
Northeast Generating Station	2081	13	0
Northeast Generating Station	2081	14	0
Northeast Generating Station	2081	15	0
Northeast Generating Station	2081	16	0
Northeast Generating Station	2081	17	1
Northeast Generating Station	2081	18	1
Peno Creek Energy Center	7964	CT1A	11
Peno Creek Energy Center	7964	CT1B	10
Peno Creek Energy Center	7964	CT2A	10
Peno Creek Energy Center	7964	CT2B	9
Peno Creek Energy Center	7964	CT3A	11
Peno Creek Energy Center	7964	CT3B	11
Peno Creek Energy Center	7964	CT4A	10
Peno Creek Energy Center	7964	CT4B	10
Ralph Green Station	2092	3	1
Rush Island	6155	1	2,086

Rush Island	6155	2	2,106
Sibley	2094	1	222
Sibley	2094	2	219
Sibley	2094	3	1,400
Sikeston	6768	1	1,268
Sioux	2107	1	1,874
Sioux	2107	2	1,690
South Harper Peaking Facility	56151	1	15
South Harper Peaking Facility	56151	2	19
South Harper Peaking Facility	56151	3	23
St. Francis Power Plant	7604	1	31
St. Francis Power Plant	7604	2	29
State Line (MO)	7296	1	8
State Line (MO)	7296	2-1	57
State Line (MO)	7296	2-2	59
Thomas Hill Energy Center	2168	MB1	829
Thomas Hill Energy Center	2168	MB2	1,296
Thomas Hill Energy Center	2168	MB3	2,674
Viaduct	2096	CT01	0

Total 45,818

Note: Being included or excluded on the list of sources in Table I does not constitute a determination that such source is or is not a *[TR]* CSAPR NO_x Annual unit. The determination of applicability for *[TR]* CSAPR NO_x Annual units is in 40 CFR 97.404 as incorporated by reference in subsection (1)(A) of this rule.

(B) New Units.

1. Annual Submittal. For the *[TR]* CSAPR NO_x Annual control period in 2017 and each control period thereafter, the director must submit to EPA, in a format prescribed by the administrator, the *[TR]* CSAPR NO_x Annual allowances as determined under this subsection by July 1 of the applicable control period.

2. New Unit Set-Asides.

A. Allowance Calculation. Every year, the director will calculate the *[TR]* CSAPR NO_x Annual allowance allocation to each *[TR]* CSAPR NO_x Annual unit in a state, in accordance with subparagraphs (3)(B)3.B. through (3)(B)3.G. and (3)(B)3.L. of this rule, for the control period in the year of the applicable submittal deadline under paragraph (3)(B)1. of this rule. Once the calculations are complete, the director will contact all facilities that will receive allocations under subparagraphs (3)(B)3.B. through (3)(B)3.G. and (3)(B)3.L. of this rule for the control period in the year of the applicable submittal deadline under paragraph (3)(B)1. of this rule to confirm that the calculations were performed in accordance with this rule, and make adjustments to the calculations, if necessary.

B. Excess Allowances. If the new unit set-aside for *[such]* the control period has any *[TR]* CSAPR NO_x Annual allowances remaining after the calculations performed under subparagraphs (3)(B)3.B. through (3)(B)3.G. and (3)(B)3.L. of this rule have been completed, then allowances will be calculated in accordance with subparagraph (3)(B)3.I. of this rule.

C. Industry Requests for Excess Allowances. If a facility owner, operator, or designated representative wishes to receive allowances in accordance with subparagraph (3)(B)3.I. of this rule, for any control period, then by April 5 of the applicable control period, the facility owner, operator, or designated representative must submit information to the director confirming that a *[TR]* CSAPR NO_x Annual unit commenced commercial operation during the period starting January 1 of the year before the year of such control period and ending March 31 of the year of such control period. The submittal must also include the calculation of eligible allowances for use in subparagraph (3)(B)3.I. of this rule, for each *[TR]* CSAPR NO_x Annual unit that commenced commercial operation during the period starting January 1 of the year before the year of such control period

and ending March 31 of the year of such control period.

(I) The calculation of eligible allowances must be in accordance with part (3)(B)3.I.(III) of this rule in order for such units to be eligible to receive any allowances in accordance with subparagraph (3)(B)3.I. of this rule.

(II) Each year, the director will review any submissions made in accordance with this paragraph to confirm that units identified in the submissions are *[TR]* CSAPR NO_x Annual units that commenced commercial operation during the period starting January 1 of the year before the year of such control period and ending March 31 of the year of such control period. The director will also confirm that the submission includes the correct calculations for eligible allowances in accordance with part (3)(B)3.I.(III) of this rule. If, during the review, the director identifies any discrepancies with the identified units or the calculations in a submission made in accordance with this paragraph, the director may request additional information from the facility owner, operator, or designated representative that made the submission. If additional information is requested, the facility owner, operator, or designated representative must provide the requested information by the deadline specified in the information request; otherwise, units identified in such submission will not be eligible for allowances in accordance with subparagraph (3)(B)3.I. of this rule for the applicable control period.

D. Public Notification. The director will determine the *[TR]* CSAPR NO_x Annual allowance allocation to each *[TR]* CSAPR NO_x Annual unit in accordance with subparagraphs (3)(B)3.I., (3)(B)3.J., and (3)(B)3.L. of this rule and 40 CFR 97.406(b)(2) and 40 CFR 97.430 through 40 CFR 97.435 as incorporated by reference in subsection (1)(A) of this rule. By June 1 of each year, the director will issue a notification making available the results of all allowance determinations from the new unit set-aside for the control period in which the notification is made.

(I) For each notification *[required]* in part (3)(B)2.D.(IIII) of this rule, the director will provide an opportunity for submission of objections to the calculations referenced in such notice.

(II) If there are objections, the director will review them and provide notification stating the outcome.

E. Allowance Changes. If any *[TR]* CSAPR NO_x Annual

allowances are added to the new unit set-aside after submittals *[as required in]* per subparagraph (3)(B)2.C. of this rule, the director will issue additional notifications, as deemed appropriate, of the allocation of such *[TR]* CSAPR NO_x Annual allowances in accordance with subparagraph (3)(B)3.J. of this rule.

3. New Unit Annual Allowance Allocation Methodology. For each control period in 2017 and thereafter and for the *[TR]* CSAPR NO_x Annual units in Missouri, the director will allocate *[TR]* CSAPR NO_x Annual allowances to the *[TR]* CSAPR NO_x Annual units as follows:

A. Units Eligible to Receive Allowances. The *[TR]* CSAPR NO_x Annual allowances will be allocated to the following *[TR]* CSAPR NO_x Annual units, except as provided in subparagraph (3)(B)3.J. of this rule:

(I) *[TR]* CSAPR NO_x Annual units that are not listed in Table I in paragraph (3)(A)2. of this rule;

(II) *[TR]* CSAPR NO_x Annual units whose allocation of an amount of *[TR]* CSAPR NO_x Annual allowances for such control period listed in Table I in paragraph (3)(A)2. of this rule is covered by 40 CFR 97.411(c)(2) or (3) **as incorporated by reference in subsection (1)(A) of this rule**;

(III) *[TR]* CSAPR NO_x Annual units that are listed in Table I in paragraph (3)(A)2. of this rule and the allocation to such unit(s) is terminated for the applicable control period pursuant to paragraph (3)(A)2. of this rule, and that operate during the control period immediately preceding such control period; or

(IV) For purposes of subparagraph (3)(B)3.I. of this rule, *[TR]* CSAPR NO_x Annual units under 40 CFR 97.411(c)(1)(ii) **as incorporated by reference in subsection (1)(A) of this rule** whose allocation of an amount of *[TR]* CSAPR NO_x Annual allowances for such control period under paragraph (3)(B)2. of this rule is covered by 40 CFR 97.411(c)(2) or (3) **as incorporated by reference in subsection (1)(A) of this rule**;

B. Total Allowances Available. The director will establish a separate new unit set-aside for the state for each such control period. Each such new unit set-aside will be allocated *[TR]* CSAPR NO_x Annual allowances in an amount equal to the difference between the Missouri *[TR]* CSAPR NO_x Annual trading budget for 2017 and thereafter, as set forth in 40 CFR 97.410(a), **as incorporated by reference in subsection (1)(A) of this rule** and the total number of allowances allocated in accordance with paragraph (3)(A)1. of this rule for such control period. The new unit set-aside will be allocated additional *[TR]* CSAPR NO_x Annual allowances (if any) in accordance with paragraph (3)(A)2. of this rule and 40 CFR 97.411(c)(5) **as incorporated by reference in subsection (1)(A) of this rule**;

C. Eligible Control Periods. The director will determine, for each *[TR]* CSAPR NO_x Annual unit described in subparagraph (3)(B)3.A. of this rule, an allocation of *[TR]* CSAPR NO_x Annual allowances for the later of the following control periods and for each subsequent control period:

(I) The control period in 2017;

(II) The first control period after the control period in which the *[TR]* CSAPR NO_x Annual unit commences commercial operation;

(III) For a unit described in part (3)(B)3.A.(II) of this rule, the first control period in which the *[TR]* CSAPR NO_x Annual unit operates in the state after operating in another jurisdiction and for which the unit is not already allocated one (1) or more *[TR]* CSAPR NO_x Annual allowances; and

(IV) For a unit described in part (3)(B)3.A.(III) of this rule, the first control period after the control period in which the unit resumes operation, or the first control period in which the allocation for such unit listed in Table I in paragraph (3)(A)2. of this rule is terminated pursuant to paragraph (3)(A)2. of this rule, whichever is later;

D. Allocations. The allocation to each *[TR]* CSAPR NO_x Annual unit described in parts (3)(B)3.A.(I) through (3)(B)3.A.(III) of this rule and for each control period described in subparagraph

(3)(B)3.C. of this rule will be an amount equal to the unit's total tons of NO_x emissions during the immediately preceding control period. The director will adjust the allocation amount in this subparagraph in accordance with subparagraphs (3)(B)3.E. through (3)(B)3.G. and (3)(B)3.L. of this rule;

E. Sum of Allowances. The director will calculate the sum of the *[TR]* CSAPR NO_x Annual allowances determined for all such *[TR]* CSAPR NO_x Annual units under subparagraph (3)(B)3.D. of this rule in the state for such control period;

F. Extra Allowance Allocation. If the amount of *[TR]* CSAPR NO_x Annual allowances in the new unit set-aside for the state for such control period is greater than or equal to the sum under subparagraph (3)(B)3.E. of this rule, then the director will allocate the amount of *[TR]* CSAPR NO_x Annual allowances determined for each such *[TR]* CSAPR NO_x Annual unit under subparagraph (3)(B)3.D. of this rule;

G. Insufficient Allowance Allocation. If the amount of *[TR]* CSAPR NO_x Annual allowances in the new unit set-aside for the state for such control period is less than the sum under subparagraph (3)(B)3.E. of this rule, then the director will allocate to each such *[TR]* CSAPR NO_x Annual unit the amount of the *[TR]* CSAPR NO_x Annual allowances determined under subparagraph (3)(B)3.D. of this rule for the unit, multiplied by the amount of *[TR]* CSAPR NO_x Annual allowances in the new unit set-aside for such control period, divided by the sum under subparagraph (3)(B)3.E. of this rule, and rounded to the nearest allowance;

H. Confirmation of Allowances. The director will contact facilities as described in subparagraph (3)(B)2.A. of this rule to confirm the amount of *[TR]* CSAPR NO_x Annual allowances allocated under subparagraphs (3)(B)3.B. through (3)(B)3.G. and (3)(B)3.L. of this rule for such control period to each *[TR]* CSAPR NO_x Annual unit eligible for such allocation;

I. Allowance Calculation for Units That Recently Began Operation. If, after completion of the procedures under subparagraphs (3)(B)3.E. through (3)(B)3.H. of this rule for such control period, any unallocated *[TR]* CSAPR NO_x Annual allowances remain in the new unit set-aside for the state for such control period, the director will allocate such *[TR]* CSAPR NO_x Annual allowances as follows:

(I) For any submission made in accordance with subparagraph (3)(B)2.C. of this rule, the submitting facility owner, operator, or designated representative may include the calculation of eligible allowances for such control period as specified in part (3)(B)3.I.(III) of this rule. If such submission is not made or fails to include the calculation of eligible allowances under this part by the April 5 deadline, or if the facility owner, operator, or designated representative fails to provide additional information requested in accordance with part (3)(B)2.C.(II) of this rule by the applicable deadline, then no allowances will be awarded to such unit in accordance with this subparagraph for such control period;

(II) The director will review submissions made in accordance with subparagraph (3)(B)2.C. of this rule, as specified in part (3)(B)2.C.(II) of this rule and may adjust the units identified in such submission if they are not eligible for allowances under this subparagraph, and the director may also adjust the calculation of eligible allowances included in such submission to ensure they are in accordance with part (3)(B)3.I.(III) of this rule;

(III) The calculation of eligible *[TR]* CSAPR NO_x Annual allowances for a specific control period for *[TR]* CSAPR NO_x Annual units that commenced commercial operation during the period starting January 1 of the year before the year of such control period and ending March 31 of the year of such control period must be as follows;

$$EA = \frac{(ER)(HR)(NP_{cap})(CP_{Tot})(CF)(24 \text{ hours/day})(1,000 \text{ kW/MW}_e)}{(2,000 \text{ lb/ton})(1,000,000 \text{ BTU/mmBTU})}$$

Where:

- EA = eligible *[TR]* CSAPR NO_x Annual Allowances
ER = the unit's permitted emission rate from the unit's construction permit approved under 10 CSR 10-6.060 (lb/mmBTU)
HR = the heat rate efficiency for the generator that the unit serves (BTU/KW-hr)
NP_{Cap} = nameplate capacity of the generator that the unit serves (MWe)
CP_{Tot} = number of days in the control period
CF = the unit's default capacity factor from Table II below

Table II – Default Capacity Factors for New Units

Unit Types	Annual SO ₂ & NO _x Programs	<i>[Ozone Season NO_x Program]</i>
Coal-Fired Steam Boiler	0.85	<i>0.92</i>
IGCC (Coal Gasification)	0.74	<i>0.73</i>
Oil-Fired Steam Boiler	0.30	<i>0.39</i>
Natural Gas-Fired Steam Boiler	0.44	<i>0.47</i>
Simple Cycle Combustion Turbine	0.24	<i>0.32</i>
Combined Cycle Combustion Turbine	0.66	<i>0.71</i>

(IV) The director will determine, for each unit described in subparagraph (3)(B)3.A. of this rule that commenced commercial operation during the period starting January 1 of the year before the year of such control period and ending March 31 of the year of such control period, the positive difference (if any) between the unit's emissions during the previous control period and the amount of eligible *[TR]* CSAPR NO_x Annual allowances as calculated under part (3)(B)3.I.(III) of this rule;

(V) The director will determine the sum of the positive differences determined under part (3)(B)3.I.(IV) of this rule;

(VI) If the amount of unallocated *[TR]* CSAPR NO_x Annual allowances remaining in the new unit set-aside for the state for such control period is greater than or equal to the sum determined under part (3)(B)3.I.(V) of this rule, then the director will allocate the amount of *[TR]* CSAPR NO_x Annual allowances determined for each such *[TR]* CSAPR NO_x Annual unit under part (3)(B)3.I.(IV) of this rule; and

(VII) If the amount of unallocated *[TR]* CSAPR NO_x Annual allowances remaining in the new unit set-aside for the state for such control period is less than the sum under part (3)(B)3.I.(V) of this rule, then the director will allocate to each such *[TR]* CSAPR NO_x Annual unit the amount of the *[TR]* CSAPR NO_x Annual allowances determined under part (3)(B)3.I.(IV) of this rule for the unit, multiplied by the amount of unallocated *[TR]* CSAPR NO_x Annual allowances remaining in the new unit set-aside for such control period, divided by the sum under part (3)(B)3.I.(V) of this rule, and rounded to the nearest allowance;

J. Distribution of Remaining Allocations. If, after completion of the procedures under subparagraphs (3)(B)3.I. and (3)(B)3.L. of this rule for such control period, any unallocated *[TR]* CSAPR NO_x Annual allowances remain in the new unit set-aside for the state for such control period, the director will allocate to each *[TR]* CSAPR NO_x Annual unit that is in the state, is allocated an amount of *[TR]* CSAPR NO_x Annual allowances listed in Table I in paragraph (3)(A)2. of this rule, and continues to be allocated *[TR]* CSAPR NO_x Annual allowances for such control period in accordance with paragraph (3)(A)2. of this rule, an amount of *[TR]* CSAPR NO_x Annual allowances equal to the following: the total amount of such remaining unallocated *[TR]* CSAPR NO_x Annual allowances in such new unit set-aside, multiplied by the unit's allocation listed in Table I in paragraph (3)(A)2. of this rule for such control period, divided by the remainder of the amount of tons in the applicable state NO_x Annual trading budget minus the amount of tons in such new unit set-aside for the state for such control period, and rounded to the nearest

allowance;

K. Public Notification. The director will issue notifications as described in subparagraphs (3)(B)2.D. and (3)(B)2.E. of this rule, of the amount of *[TR]* CSAPR NO_x Annual allowances allocated under subparagraphs (3)(B)3.B. through (3)(B)3.G., (3)(B)3.I., (3)(B)3.J., and (3)(B)3.L. of this rule for such control period to each *[TR]* CSAPR NO_x Annual unit eligible for such allocation; and

L. Allocation Tabulations That Exceed or Are Less Than the New Unit Set-Aside.

(I) Notwithstanding the requirements of subparagraphs (3)(B)3.B. through (3)(B)3.K. of this rule, if the calculations of allocations of a new unit set-aside for a control period in a given year under subparagraph (3)(B)3.G. of this rule, subparagraph (3)(B)3.F. and part (3)(B)3.I.(VII) of this rule, or subparagraph (3)(B)3.F., part (3)(B)3.I.(VI), and subparagraph (3)(B)3.J. of this rule would otherwise result in total allocations of such new unit set-aside exceeding the total amount of such new unit set-aside, then the director will adjust the results of the calculations under subparagraph (3)(B)3.G., part (3)(B)3.I.(VII), or subparagraph (3)(B)3.J. of this rule, as applicable, as follows. The director will list the *[TR]* CSAPR NO_x Annual units in descending order based on the amount of such units' allocations under subparagraph (3)(B)3.G., part (3)(B)3.I.(VII), or subparagraph (3)(B)3.J. of this rule, as applicable, and, in cases of equal allocation amounts, in alphabetical order of the relevant source's name and numerical order of the relevant unit's identification number, and will reduce each unit's allocation under subparagraph (3)(B)3.G., part (3)(B)3.I.(VII), or subparagraph (3)(B)3.J. of this rule, as applicable, by one (1) *[TR]* CSAPR NO_x Annual allowance (but not below zero (0)) in the order in which the units are listed and will repeat this reduction process as necessary, until the total allocations of such new unit set-aside equal the total amount of such new unit set-aside.

(II) Notwithstanding the requirements of subparagraphs (3)(B)3.J. and (3)(B)3.K. of this rule, if the calculations of allocations of a new unit set-aside for a control period in a given year under subparagraph (3)(B)3.F., part (3)(B)3.I.(VI), and subparagraph (3)(B)3.J. of this rule would otherwise result in a total allocations of such new unit set-aside less than the total amount of such new unit set-aside, then the director will adjust the results of the calculations under subparagraph (3)(B)3.J. of this rule, as follows. The director will list the *[TR]* CSAPR NO_x Annual units in descending order based on the amount of such units' allocations under subparagraph (3)(B)3.J. of this rule and, in cases of equal allocation amounts, in alphabetical order of the relevant source's name and numerical order of the relevant unit's identification number, and will increase each unit's allocation under subparagraph (3)(B)3.J. of this rule by one (1) *[TR]* CSAPR NO_x Annual allowance in the order in which the units are listed and will repeat this increase process as necessary, until the total allocations of such new unit set-aside equal the total amount of such new unit set-aside.

(4) Reporting and Record Keeping.

(A) The monitoring, reporting, and record keeping provisions of the CSAPR NO_x Annual Trading Program may be found in 40 CFR 97.430 through 40 CFR 97.435 as incorporated by reference in subsection (1)(A) of this rule.

(B) The director *[shall]* will maintain *[TR]* CSAPR NO_x Annual unit allowance records submitted to EPA for each *[TR]* CSAPR NO_x Annual control period for a minimum of five (5) years.

AUTHORITY: section 643.050, RSMo [Supp. 2013] 2016. Original rule filed May 15, 2015, effective Dec. 30, 2015. Amended: Filed June 21, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed amendment will begin at 9:00 a.m., September 27, 2018. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded to any interested person. Interested persons, whether or not heard, may submit a statement of their views until 5:00 p.m., October 4, 2018. Send online comments via the proposed rules web page www.dnr.mo.gov/proposed-rules, email comments to apcprulespn@dnr.mo.gov, or written comments to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 6—Air Quality Standards, Definitions, Sampling
and Reference Methods and Air Pollution Control
Regulations for the Entire State of Missouri

PROPOSED AMENDMENT

10 CSR 10-6.374 Cross-State Air Pollution Rule NO_x Ozone Season [NO_x] Group 2 Trading [Allowance Allocations] Program. The commission proposes to amend the title, purpose, and sections (1)–(4). If the commission adopts this rule action, the department intends to submit this rule amendment to the U.S. Environmental Protection Agency to replace the current rule that is in the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Proposed Rules website www.dnr.mo.gov/proposed-rules.

PURPOSE: The purpose of this rulemaking is to comply with Executive Order 17-03 criteria and will remove the unnecessary use of restrictive words, update incorporations by reference, and add definitions specific to this rule. This amendment will also fully transfer responsibility for the Cross-State Air Pollution Rule (CSAPR) Nitrogen Oxide (NO_x) Trading Program requirements to Missouri rather than keeping Missouri subject to a partial Federal Implementation Plan (FIP). The evidence supporting the need for this proposed rulemaking, per 536.016, RSMo, is **Federal Register Notice** dated October 26, 2016 (81 FR 74504); and Executive Order 17-03 Red Tape Reduction Review and related comments.

PURPOSE: The purpose of this rule is to [reallocate ozone season nitrogen oxides (NO_x) emission allowances for use with the U.S. Environmental Protection Agency's (EPA's) ozone season NO_x regional emission reduction program as established in the federal Cross-State Air Pollution Rule (CSAPR) for 2017 and beyond. The federal CSAPR program will continue to be administered by EPA. The state rule only redistributes ozone season NO_x allowances.] have Missouri responsible for the Cross-State Air Pollution Rule (CSAPR) Nitrogen Oxide (NO_x) Ozone Season Group 2 Trading Program rather than the U.S. Environmental Protection Agency. This rule makes no changes to the federal process to allocate allowances to affected units in Missouri for compliance with the CSAPR NO_x Ozone Season Group 2 Trading Program. The evidence supporting the need for this [proposed rulemaking] rule, per section 536.016, RSMo, is the [September 13, 2011, December 16, 2014, and March

24, 2015 affected industry meeting summaries indicating general agreement to reallocate unused NO_x allowances to municipalities that received zero (0) allowances] February 8, 2018 affected industry meeting summary.

(1) Applicability. [This rule applies to all Transport Rule (TR) nitrogen oxides (NO_x) Ozone Season units located in the state of Missouri.]

(A) Unless otherwise noted in subsection (1)(B) of this rule, the provisions of 40 CFR 97.802 through 40 CFR 97.835 promulgated as of July 1, 2018 are hereby incorporated by reference as published by the Office of the Federal Register. Copies can be obtained from the U.S. Publishing Office Bookstore, 710 N. Capitol Street NW, Washington, DC 20401. This rule does not incorporate any subsequent amendments or additions.

(B) Exceptions to subsection (1)(A) of this rule are as follows:

1. Any of the requirements imposed on any unit in Indian country within the borders of any state in the provisions of 40 CFR 97.802 through 40 CFR 97.835;
2. 40 CFR 97.811(b)(2);
3. 40 CFR 97.811(c)(5)(iii);
4. 40 CFR 97.812(b);
5. 40 CFR 97.821(h); and
6. 40 CFR 97.821(j).

(2) Definitions.

(A) Definitions for key words and phrases used in this rule may be found in 40 CFR [97.502] 97.802 and 40 CFR [97.503] 97.803 promulgated as of July 1, 2014, and Federal Register Notice 79 FR 71663 promulgated on December 3, 2014, are hereby incorporated by reference as published by the Office of the Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, D.C. 20408] 97.803 as incorporated by reference in subsection (1)(A) of this rule.

[(B) Notification—Any action by the director to convey information to affected sources and interested parties. This includes, but is not limited to, public web postings with email alerts.]

[(C)](B) Definitions of certain terms specified in this rule, other than those defined in this rule section, may be found in 10 CSR 10-6.020.

(3) General Provisions. [This rule replaces 40 Code of Federal Regulations (CFR) 97.511(a), 40 CFR 97.511(b)(1) and 40 CFR 97.512(a) promulgated as of June 30, 2014, and Federal Register Notice 79 FR 71663 promulgated on December 3, 2014, as published by the Office of the Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, D.C. 20408.] The general provisions for the Cross-State Air Pollution Rule (CSAPR) Nitrogen Oxide (NO_x) Ozone Season Group 2 Trading Program may be found in 40 CFR 97.804 through 40 CFR 97.828 as incorporated by reference in subsection (1)(A) of this rule.

[(A) Existing Units.

1. Annual Submittal. The director must submit to the U.S. Environmental Protection Agency (EPA), in a format prescribed by the administrator, the TR NO_x Ozone Season allowances listed in Table I taking into account any modifications necessary in accordance with paragraph (3)(A)2. of this rule. This submittal must meet the following schedule:

A. By June 1, 2016, the director will submit to EPA allowances for TR NO_x Ozone Season units for the control periods in 2017 and 2018;

B. By June 1, 2017, the director will submit to EPA allowances for TR NO_x Ozone Season units for the control periods in 2019 and 2020;

C. By June 1, 2018, the director will submit to EPA allowances for TR NO_x Ozone Season units for the control

periods in 2021 and 2022; and

D. By June 1, 2019, and June 1 of each year thereafter, the director will submit to EPA allowances for TR NO_x Ozone Season units for the control periods in the fourth year after the year in which the submission is made.

2. Non-operating Units. If a unit in Table I of this rule does not operate during two (2) consecutive control periods after 2014, the submittal made under paragraph (3)(A)1. of this rule will show zero (0) TR Ozone Season NO_x allowances for such unit for the control period in the fifth year after these two (2) such years and in each year after that fifth year. All NO_x Ozone Season allowances that would otherwise have been allocated to such unit will be allocated to the new unit set-aside for the state for the respective years involved. If this subsection is applicable, any resulting changes to the submittal under paragraph (3)(A)1. of this rule will be determined in accordance with the following:

A. Every year, the director will review the operation of each unit listed in Table I and issue a notification that lists any unit in Table I that has not operated during two (2) consecutive control periods after 2014. Any notification made under this subparagraph will specify the first year in which allowances listed in Table I will be terminated for the applicable unit(s) under paragraph (3)(A)2. of this rule;

B. For each notification required in subparagraph (3)(A)2.A. of this rule, the director will provide an opportunity for submission of objections to the units referenced in such notice that must be submitted by the deadline specified in such notification in order to be considered; and

C. If there are objections, the director will review them and issue a notification responding to objections received along with any adjustments made to the list.

Table 1

<i>Source Name</i>	<i>Source ID</i>	<i>Unit ID</i>	<i>TR NO_x Ozone Season unit allowances (tons) for 2017 and thereafter</i>
<i>Asbury</i>	<i>2076</i>	<i>1</i>	<i>394</i>
<i>Audrain Power Plant</i>	<i>55234</i>	<i>CT1</i>	<i>1</i>
<i>Audrain Power Plant</i>	<i>55234</i>	<i>CT2</i>	<i>1</i>
<i>Audrain Power Plant</i>	<i>55234</i>	<i>CT3</i>	<i>1</i>
<i>Audrain Power Plant</i>	<i>55234</i>	<i>CT4</i>	<i>1</i>
<i>Audrain Power Plant</i>	<i>55234</i>	<i>CT5</i>	<i>1</i>
<i>Audrain Power Plant</i>	<i>55234</i>	<i>CT6</i>	<i>1</i>
<i>Audrain Power Plant</i>	<i>55234</i>	<i>CT7</i>	<i>1</i>
<i>Audrain Power Plant</i>	<i>55234</i>	<i>CT8</i>	<i>1</i>
<i>Blue Valley</i>	<i>2132</i>	<i>3</i>	<i>65</i>
<i>Chamois Power Plant</i>	<i>2169</i>	<i>2</i>	<i>101</i>
<i>Chillicothe</i>	<i>2122</i>	<i>GT1A</i>	<i>1</i>
<i>Chillicothe</i>	<i>2122</i>	<i>GT1B</i>	<i>0</i>
<i>Chillicothe</i>	<i>2122</i>	<i>GT2A</i>	<i>0</i>
<i>Chillicothe</i>	<i>2122</i>	<i>GT2B</i>	<i>0</i>
<i>Columbia</i>	<i>2123</i>	<i>6</i>	<i>18</i>
<i>Columbia</i>	<i>2123</i>	<i>7</i>	<i>26</i>
<i>Columbia</i>	<i>2123</i>	<i>8</i>	<i>0</i>
<i>Columbia Energy Center (MO)</i>	<i>55447</i>	<i>CT01</i>	<i>1</i>
<i>Columbia Energy Center (MO)</i>	<i>55447</i>	<i>CT02</i>	<i>1</i>
<i>Columbia Energy Center (MO)</i>	<i>55447</i>	<i>CT03</i>	<i>1</i>
<i>Columbia Energy Center (MO)</i>	<i>55447</i>	<i>CT04</i>	<i>0</i>
<i>Dogwood Energy Facility</i>	<i>55178</i>	<i>CT-1</i>	<i>23</i>
<i>Dogwood Energy Facility</i>	<i>55178</i>	<i>CT-2</i>	<i>18</i>
<i>Empire District Elec Co Energy Ctr</i>	<i>6223</i>	<i>1</i>	<i>1</i>
<i>Empire District Elec Co Energy Ctr</i>	<i>6223</i>	<i>2</i>	<i>1</i>
<i>Empire District Elec Co Energy Ctr</i>	<i>6223</i>	<i>3A</i>	<i>6</i>
<i>Empire District Elec Co Energy Ctr</i>	<i>6223</i>	<i>3B</i>	<i>6</i>
<i>Empire District Elec Co Energy Ctr</i>	<i>6223</i>	<i>4A</i>	<i>6</i>
<i>Empire District Elec Co Energy Ctr</i>	<i>6223</i>	<i>4B</i>	<i>6</i>
<i>Essex Power Plant</i>	<i>7749</i>	<i>1</i>	<i>7</i>
<i>Fairgrounds</i>	<i>2082</i>	<i>CT01</i>	<i>0</i>
<i>Greenwood Energy Center</i>	<i>6074</i>	<i>1</i>	<i>2</i>
<i>Greenwood Energy Center</i>	<i>6074</i>	<i>2</i>	<i>2</i>
<i>Greenwood Energy Center</i>	<i>6074</i>	<i>3</i>	<i>3</i>
<i>Greenwood Energy Center</i>	<i>6074</i>	<i>4</i>	<i>3</i>
<i>Hawthorn</i>	<i>2079</i>	<i>5A</i>	<i>1,082</i>
<i>Hawthorn</i>	<i>2079</i>	<i>6</i>	<i>1</i>
<i>Hawthorn</i>	<i>2079</i>	<i>7</i>	<i>6</i>

<i>Hawthorn</i>	2079	8	7
<i>Hawthorn</i>	2079	9	21
<i>Higginsville Municipal Power Plant</i>	2131	4A	1
<i>Higginsville Municipal Power Plant</i>	2131	4B	0
<i>Holden Power Plant</i>	7848	1	3
<i>Holden Power Plant</i>	7848	2	4
<i>Holden Power Plant</i>	7848	3	3
<i>Howard Bend</i>	2102	CT1A	0
<i>Howard Bend</i>	2102	CT1B	0
<i>Iatan</i>	6065	1	1,374
<i>James River</i>	2161	GT1	6
<i>James River</i>	2161	GT2	12
<i>James River</i>	2161	3	87
<i>James River</i>	2161	4	102
<i>James River</i>	2161	5	186
<i>John Twitty Energy Center</i>	6195	1	351
<i>John Twitty Energy Center</i>	6195	CT1A	1
<i>John Twitty Energy Center</i>	6195	CT1B	1
<i>John Twitty Energy Center</i>	6195	CT2A	1
<i>John Twitty Energy Center</i>	6195	CT2B	1
<i>Labadie</i>	2103	1	986
<i>Labadie</i>	2103	2	1,038
<i>Labadie</i>	2103	3	1,115
<i>Labadie</i>	2103	4	1,100
<i>Lake Road</i>	2098	6	178
<i>Lake Road</i>	2098	GT5	1
<i>McCartney Generating Station</i>	7903	MGS1A	9
<i>McCartney Generating Station</i>	7903	MGS1B	9
<i>McCartney Generating Station</i>	7903	MGS2A	8
<i>McCartney Generating Station</i>	7903	MGS2B	8
<i>Meramec</i>	2104	1	255
<i>Meramec</i>	2104	2	250
<i>Meramec</i>	2104	3	483
<i>Meramec</i>	2104	4	632
<i>Meramec</i>	2104	CT01	0
<i>Meramec</i>	2104	CT2A	0
<i>Meramec</i>	2104	CT2B	0
<i>Mexico</i>	6650	CT01	0
<i>Moberly</i>	6651	CT01	0
<i>Montrose</i>	2080	1	311
<i>Montrose</i>	2080	2	295
<i>Montrose</i>	2080	3	307
<i>Moreau</i>	6652	CT01	0
<i>New Madrid Power Plant</i>	2167	1	989
<i>New Madrid Power Plant</i>	2167	2	994
<i>Nodaway Power Plant</i>	7754	1	4
<i>Nodaway Power Plant</i>	7754	2	5
<i>Northeast Generating Station</i>	2081	11	0

Northeast Generating Station	2081	12	0
Northeast Generating Station	2081	13	0
Northeast Generating Station	2081	14	0
Northeast Generating Station	2081	15	0
Northeast Generating Station	2081	16	0
Northeast Generating Station	2081	17	0
Northeast Generating Station	2081	18	0
Peno Creek Energy Center	7964	CT1A	8
Peno Creek Energy Center	7964	CT1B	7
Peno Creek Energy Center	7964	CT2A	7
Peno Creek Energy Center	7964	CT2B	6
Peno Creek Energy Center	7964	CT3A	7
Peno Creek Energy Center	7964	CT3B	8
Peno Creek Energy Center	7964	CT4A	8
Peno Creek Energy Center	7964	CT4B	8
Ralph Green Station	2092	3	1
Rush Island	6155	1	885
Rush Island	6155	2	916
Sibley	2094	1	91
Sibley	2094	2	94
Sibley	2094	3	611
Sikeston	6768	1	548
Sioux	2107	1	773
Sioux	2107	2	690
South Harper Peaking Facility	56151	1	12
South Harper Peaking Facility	56151	2	16
South Harper Peaking Facility	56151	3	20
St. Francis Power Plant	7604	1	19
St. Francis Power Plant	7604	2	18
State Line (MO)	7296	1	5
State Line (MO)	7296	2-1	28
State Line (MO)	7296	2-2	29
Thomas Hill Energy Center	2168	MB1	366
Thomas Hill Energy Center	2168	MB2	557
Thomas Hill Energy Center	2168	MB3	1,166
Viaduct	2096	CT01	0

Total

19,831

Note: Being included or excluded on the list of sources in Table I does not constitute a determination that such source is or is not a TR NO_x Ozone Season unit. The determination of applicability for TR NO_x Ozone Season units is in 40 CFR 97.504.

(B) New Units.

1. Annual Submittal. For the TR NO_x Ozone Season control period in 2017 and each control period thereafter, the director must submit to EPA, in a format prescribed by the administrator, the TR NO_x Ozone Season allowances as determined under this subsection by July 1 of the applicable control period.

2. New unit set-asides.

A. Allowance Calculation. Every year, the director will calculate the TR NO_x Ozone Season allowance allocation to each TR NO_x Ozone Season unit in a state, in accordance with subparagraphs (3)(B)3.B. through (3)(B)3.G. and (3)(B)3.L. of this rule, for the control period in the year of the applicable submittal deadline under paragraph (3)(B)1. of

this rule. Once the calculations are complete, the director will contact all facilities that will receive allocations under subparagraphs (3)(B)3.B. through (3)(B)3.G. and (3)(B)3.L. of this rule for the control period in the year of the applicable submittal deadline under paragraph (3)(B)1. of this rule to confirm that the calculations were performed in accordance with this rule, and make adjustments to the calculations if necessary.

B. Excess Allowances. If the new unit set-aside for such control period contains TR NO_x Ozone Season allowances remaining after the calculations performed under subparagraphs (3)(B)3.B. through (3)(B)3.G. and (3)(B)3.L. of this rule have been completed, then allowances will be calculated in accordance with subparagraph (3)(B)3.I. of this

rule.

C. Industry Requests for Excess Allowances. If a facility owner, operator, or designated representative wishes to receive allowances in accordance with subparagraph (3)(B)3.I. of this rule, for any control period, then by April 5 of the applicable control period, the facility owner, operator, or designated representative must submit information to the director confirming that a TR NO_x Ozone Season unit commenced commercial operation during the period starting May 1 of the year before the year of such control period and ending March 31 of the year of such control period. The submittal must also include the calculation of eligible allowances for use in subparagraph (3)(B)3.I. of this rule, for each TR NO_x Ozone Season unit that commenced operation during the period starting May 1 of the year before the year of such control period and ending March 31 of the year of such control period.

(I) The calculation of eligible allowances must be in accordance with part (3)(B)3.I.(III) of this rule in order for such units to be eligible to receive any allowances in accordance with subparagraph (3)(B)3.I. of this rule.

(II) Each year, the director will review any submissions made in accordance with this paragraph to confirm that units identified in the submissions are TR NO_x Ozone Season units that commenced commercial operation during the period starting May 1 of the year before the year of such control period and ending March 31 of the year of such control period. The director will also confirm that the submission includes the correct calculations for eligible allowances in accordance with part (3)(B)3.I.(III) of this rule. If, during the reviews, the director identifies any discrepancies with the identified units or the calculations in a submission made in accordance with the paragraph, the director may request additional information from the facility owner, operator, or designated representative that made the submission. If additional information is requested, the facility owner, operator, or designated representative must provide the requested information by the deadline specified in the information request; otherwise, units identified in such submission will not be eligible for allowances in accordance with subparagraph (3)(B)3.I. of this rule for the applicable control period.

D. Public Notification. The director will determine the TR NO_x Ozone Season allowance allocation to each TR NO_x Ozone Season unit in accordance with subparagraphs (3)(B)3.I., (3)(B)3.J., and (3)(B)3.L. of this rule and 40 CFR 97.506(b)(2) and 40 CFR 97.530 through 40 CFR 97.535. By June 1 of each year, the director will issue a notification making available the results of all allowance determinations from the new unit set-aside for the control period in which the notification is made.

(I) For each notification required in part (3)(B)2.D.(II) of this rule, the director will provide an opportunity for submission of objections to the calculations referenced in such notice.

(II) If there are objections, the director will review them and provide notification stating the outcome.

E. Allowance Changes. If any TR NO_x Ozone Season allowances are added to the new unit set-aside after submittals as required in subparagraph (3)(B)2.C. of this rule, the director will issue additional notifications, as deemed appropriate, of the allocation of such TR NO_x Ozone Season allowances in accordance with subparagraph (3)(B)3.J. of this rule.

3. New Unit Ozone Season Allowance Allocation Methodology. For each control period in 2017 and thereafter and for the TR NO_x Ozone Season units in Missouri, the director will allocate TR NO_x Ozone Season allowances to the TR NO_x Ozone Season units as follows:

A. Units Eligible to Receive Allowances. The TR NO_x Ozone Season allowances will be allocated to the following TR NO_x Ozone Season units, except as provided in subparagraph (3)(B)3.J. of this rule:

(I) TR NO_x Ozone Season units that are not listed in Table I in paragraph (3)(A)2. of this rule;

(II) TR NO_x Ozone Season units whose allocation of an amount of TR NO_x Ozone Season allowances for such control period listed in Table I in paragraph (3)(A)2. of this rule is covered by 40 CFR 97.511(c)(2) or (3);

(III) TR NO_x Ozone Season units that are listed in Table I in paragraph (3)(A)2. of this rule and the allocation to such unit(s) is terminated for the applicable control period pursuant to paragraph (3)(A)2. of this rule, and that operate during the control period immediately preceding such control period; or

(IV) For purposes of subparagraph (3)(B)3.I. of this rule, TR NO_x Ozone Season units under 40 CFR 97.511(c)(1)(ii) whose allocation of an amount of TR NO_x Ozone Season allowances for such control period under subparagraph (3)(B)2. of this rule is covered by 40 CFR 97.511(c)(2) or (3).

B. Total Allowances Available. The director will establish a separate new unit set-aside for the state for each such control period. Each such new unit set-aside will be allocated TR NO_x Ozone Season allowances in an amount equal to the difference between the Missouri TR NO_x Ozone Season trading budget for 2017 and thereafter, as set forth in 40 CFR 97.510(a), and the total number of allowances allocated in accordance with paragraph (3)(A)1. of this rule for such control period. The new unit set-aside will be allocated additional TR NO_x Ozone Season allowances (if any) in accordance with paragraph (3)(A)2. of this rule and 40 CFR 97.511(c)(5);

C. Eligible Control Periods. The director will determine, for each TR NO_x Ozone Season unit described in subparagraph (3)(B)3.A. of this rule, an allocation of TR NO_x Ozone Season allowances for the later of the following control periods and for each subsequent control period:

(I) The control period in 2017;

(II) The first control period after the control period in which the TR NO_x Ozone Season unit commences commercial operation;

(III) For a unit described in part (3)(B)3.A.(II) of this rule, the first control period in which the TR NO_x Ozone Season unit operates in the state after operating in another jurisdiction and for which the unit is not already allocated one (1) or more TR NO_x Ozone Season allowances; and

(IV) For a unit described in part (3)(B)3.A.(III) of this rule, the first control period after the control period in which the unit resumes operation, or the first control period in which the allocation for such unit listed in Table I in paragraph (3)(A)2. of this rule is terminated pursuant to paragraph (3)(A)2. of this rule, whichever is later;

D. Allocations. The allocation to each TR NO_x Ozone Season unit described in parts (3)(B)3.A.(I) through (3)(B)3.A.(III) of this rule and for each control period described in subparagraph (3)(B)3.C. of this rule will be an amount equal to the unit's total tons of NO_x emissions during the immediately preceding control period. The director will adjust the allocation amount in this subparagraph in accordance with subparagraphs (3)(B)3.E. through (3)(B)3.G. and (3)(B)3.L. of this rule;

E. Sum of Allowances. The director will calculate the sum of the TR NO_x Ozone Season allowances determined for all such TR NO_x Ozone Season units under subparagraph (3)(B)3.D. of this rule in the state for such control period;

F. Extra Allowance Allocation. If the amount of TR

NO_x Ozone Season allowances in the new unit set-aside for the state for such control period is greater than or equal to the sum under subparagraph (3)(B)3.E. of this rule, then the director will allocate the amount of TR NO_x Ozone Season allowances determined for each such TR NO_x Ozone Season unit under subparagraph (3)(B)3.D. of this rule;

G. *Insufficient Allowance Allocation.* If the amount of TR NO_x Ozone Season allowances in the new unit set-aside for the state for such control period is less than the sum under subparagraph (3)(B)3.E. of this rule, then the director will allocate to each such TR NO_x Ozone Season unit the amount of the TR NO_x Ozone Season allowances determined under subparagraph (3)(B)3.D. of this rule for the unit, multiplied by the amount of TR NO_x Ozone Season allowances in the new unit set-aside for such control period, divided by the sum under subparagraph (3)(B)3.E. of this rule, and rounded to the nearest allowance;

H. *Confirmation of Allowances.* The director will contact facilities, as described in subparagraph (3)(B)2.A. of this rule to confirm the amount of TR NO_x Ozone Season allowances allocated under subparagraphs (3)(B)3.B. through (3)(B)3.G. and (3)(B)3.L. of this rule for such control period to each TR NO_x Ozone Season unit eligible for such allocation;

I. *Allowance Calculation for Units That Recently Began Operation.* If, after completion of the procedures under subparagraphs (3)(B)3.E. through (3)(B)3.H. of this rule for such control period, any unallocated TR NO_x Ozone Season allowances remain in the new unit set-aside for the state for such control period, the director will allocate such TR NO_x Ozone Season allowances as follows:

(I) For any submission made in accordance with subparagraph (3)(B)2.C. of this rule, the submitting facility owner, operator, or designated representative may include the calculation of eligible allowances for such control period as specified in part (3)(B)3.I.(III) of this rule. If such submission is not made or fails to include the calculation of eligible allowances under this part by the April 5 deadline, or if the facility owner, operator, or designated representative fails to provide additional information requested in accordance with part (3)(B)2.C.(II) of this rule by the applicable deadline, then no allowances will be awarded to such unit in accordance with this subparagraph for such control period;

(II) The director will review submissions made in accordance with subparagraph (3)(B)2.C. of this rule, as specified in part (3)(B)2.C.(III) of this rule and may adjust the units identified in such submission if they are not eligible for allowances under this subparagraph, and the director may also adjust the calculation of eligible allowances included in such submission to ensure they are in accordance with part (3)(B)3.I.(III) of this rule;

(III) The calculation of eligible TR NO_x Ozone Season allowances for a specific control period for TR NO_x Ozone Season units that commenced commercial operation during the period starting May 1 of the year before the year of such control period and ending March 31 of the year of such control period must be as follows;

$$EA = \frac{(ER)(HR)(NP_{Cap})(CP_{Tot})(CF)(24 \text{ hours/day})(1,000 \text{ kW/MWe})}{(2,000 \text{ lb/ton})(1,000,000 \text{ BTU/mmBTU})}$$

Where:

EA = eligible TR NO_x Ozone Season Allowances
ER = the unit's permitted emission rate from the unit's construction permit approved under 10 CSR 10-6.060 (lb/mmBTU)

HR = the heat rate efficiency for the generator that the unit serves (BTU/kW-hr)

NP_{Cap} = nameplate capacity of the generator that the unit serves (MWe)

CP_{Tot} = number of days in the control period

CF = the unit's default capacity factor from Table II below

Table II – Default Capacity Factors for New Units

Unit Types	Annual SO ₂ & NO _x Programs	Ozone Season NO _x Program
Coal-Fired Steam Boiler	0.85	0.92
IGCC (Coal Gasification)	0.74	0.73
Oil-Fired Steam Boiler	0.30	0.39
Natural Gas-Fired Steam Boiler	0.44	0.47
Simple Cycle Combustion Turbine	0.24	0.32
Combined Cycle Combustion Turbine	0.66	0.71

(IV) The director will determine, for each unit described in subparagraph (3)(B)3.A. of this rule that commenced commercial operation during the period starting May 1 of the year before the year of such control period and ending March 31 of the year of such control period, the positive difference (if any) between the unit's emissions during the previous control period and the amount of eligible TR NO_x Ozone Season allowances as calculated under part (3)(B)3.I.(III) of this rule;

(V) The director will determine the sum of the positive differences determined under part (3)(B)3.I.(IV) of this rule;

(VI) If the amount of unallocated TR NO_x Ozone Season allowances remaining in the new unit set-aside for the state for such control period is greater than or equal to the sum determined under part (3)(B)3.I.(V) of this rule, then the director will allocate the amount of TR NO_x Ozone Season allowances determined for each such TR NO_x Ozone Season unit under part (3)(B)3.I.(IV) of this rule; and

(VII) If the amount of unallocated TR NO_x Ozone Season allowances remaining in the new unit set-aside for the state for such control period is less than the sum under part (3)(B)3.I.(V) of this rule, then the director will allocate to each such TR NO_x Ozone Season unit the amount of the TR NO_x Ozone Season allowances determined under part (3)(B)3.I.(IV) of this rule for the unit, multiplied by the amount of unallocated TR NO_x Ozone Season allowances remaining in the new unit set-aside for such control period, divided by the sum under part (3)(B)3.I.(V) of this rule, and rounded to the nearest allowance;

J. *Distribution of Remaining Allocations.* If, after completion of the procedures under subparagraphs (3)(B)3.I. and (3)(B)3.L. of this rule for such control period, any unallocated TR NO_x Ozone Season allowances remain in the new unit set-aside for the state for such control period, the director will allocate to each TR NO_x Ozone Season unit that is in the state, is allocated an amount of TR NO_x Ozone Season allowances listed in Table I in paragraph (3)(A)2. of this rule, and continues to be allocated TR NO_x Ozone Season allowances for such control period in accordance with paragraph (3)(A)2. of this rule, an amount of TR NO_x Ozone Season allowances equal to the following: the total amount of such remaining unallocated TR NO_x Ozone Season allowances in such new unit set-aside, multiplied by the unit's allocation listed in Table I in paragraph (3)(A)2. of this rule for such control period, divided by the remainder of the

amount of tons in the applicable state NO_x Ozone Season trading budget minus the amount of tons in such new unit set-aside for the state for such control period, and rounded to the nearest allowance;

K. **Public Notification.** The director will issue notifications in subparagraphs (3)(B)2.D. and (3)(B)2.E. of this rule, of the amount of TR NO_x Ozone Season allowances allocated under subparagraphs (3)(B)3.B. through (3)(B)3.G., (3)(B)3.I., (3)(B)3.J., and (3)(B)3.L. of this rule for such control period to each TR NO_x Ozone Season unit eligible for such allocation; and

L. **Allocation Tabulations That Exceed or Are Less Than the New Unit Set-Aside.**

(I) Notwithstanding the requirements of subparagraphs (3)(B)3.B. through (3)(B)3.K. of this rule, if the calculations of allocations of a new unit set-aside for a control period in a given year under subparagraph (3)(B)3.G. of this rule, subparagraph (3)(B)3.F. and part (3)(B)3.I.(VII) of this rule, or subparagraph (3)(B)3.F., part (3)(B)3.I.(VI), and subparagraph (3)(B)3.J. of this rule would otherwise result in total allocations of such new unit set-aside exceeding the total amount of such new unit set-aside, then the director will adjust the results of the calculations under subparagraph (3)(B)3.G., part (3)(B)3.I.(VII), or subparagraph (3)(B)3.J. of this rule, as applicable, as follows. The director will list the TR NO_x Ozone Season units in descending order based on the amount of such units' allocations under subparagraph (3)(B)3.G., part (3)(B)3.I.(VII), or subparagraph (3)(B)3.J. of this rule, as applicable, and, in cases of equal allocation amounts, in alphabetical order of the relevant source's name and numerical order of the relevant unit's identification number, and will reduce each unit's allocation under subparagraph (3)(B)3.G., part (3)(B)3.I.(VII), or subparagraph (3)(B)3.J. of this rule, as applicable, by one (1) TR NO_x Ozone Season allowance (but not below zero (0)) in the order in which the units are listed and will repeat this reduction process as necessary, until the total allocations of such new unit set-aside equal the total amount of such new unit set-aside.

(II) Notwithstanding the requirements of subparagraphs (3)(B)3.J. and (3)(B)3.K. of this rule, if the calculations of allocations of a new unit set-aside for a control period in a given year under subparagraph (3)(B)3.F., part (3)(B)3.I.(VI), and subparagraph (3)(B)3.J. of this rule would otherwise result in a total allocations of such new unit set-aside less than the total amount of such new unit set-aside, then the director will adjust the results of the calculations under subparagraph (3)(B)3.J. of this rule, as follows. The director will list the TR NO_x Ozone Season units in descending order based on the amount of such units' allocations under subparagraph (3)(B)3.J. of this rule and, in cases of equal allocation amounts, in alphabetical order of the relevant source's name and numerical order of the relevant unit's identification number, and will increase each unit's allocation under subparagraph (3)(B)3.J. of this rule by one (1) TR NO_x Ozone Season allowance in the order in which the units are listed and will repeat this increase process as necessary, until the total allocations of such new unit set-aside equal the total amount of such new unit set-aside.]

(4) **Reporting and Record Keeping.** [The director shall maintain TR NO_x Ozone Season unit allowance records submitted to EPA for each TR NO_x Ozone Season control period for a minimum of five (5) years.] The monitoring, reporting, and record keeping provisions of the CSAPR NO_x Ozone Season Group 2 Trading Program may be found in 40 CFR 97.830 through 40 CFR 97.835 as incorporated by reference in subsection (1)(A) of this rule.

AUTHORITY: section 643.050, RSMo [Supp. 2013] 2016. Original rule filed May 15, 2015, effective Dec. 30, 2015. Amended: Filed June 21, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed amendment will begin at 9:00 a.m., September 27, 2018. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded to any interested person. Interested persons, whether or not heard, may submit a statement of their views until 5:00 p.m., October 4, 2018. Send online comments via the proposed rules web page www.dnr.mo.gov/proposed-rules, email comments to apcprulespn@dnr.mo.gov, or written comments to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 6—Air Quality Standards, Definitions, Sampling
and Reference Methods and Air Pollution Control
Regulations for the Entire State of Missouri**

PROPOSED AMENDMENT

10 CSR 10-6.376 Cross-State Air Pollution Rule Annual SO_2 Group 1 Trading [Allowance Allocations] Program. The commission proposes to amend the title, purpose, sections (1), (3), and (4), and subsection (2)(A). If the commission adopts this rule action, the department intends to submit this rule amendment to the U.S. Environmental Protection Agency to replace the current rule that is in the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Proposed Rules website www.dnr.mo.gov/proposed-rules.

PURPOSE: The purpose of this rulemaking is to comply with Executive Order 17-03 criteria and will remove the unnecessary use of restrictive words, update incorporations by reference, and add definitions specific to this rule. This amendment will also fully transfer responsibility for the Cross-State Air Pollution Rule (CSAPR) Annual Sulfur Dioxide (SO_2) Trading Program requirements to Missouri rather than keeping Missouri subject to a partial Federal Implementation Plan (FIP). The evidence supporting the need for this proposed rulemaking, per 536.016, RSMo, is **Federal Register** Notice dated October 26, 2016 (81 FR 74504); and Executive Order 17-03 Red Tape Reduction Review and related comments.

PURPOSE: The purpose of this rule is to [reallocate annual sulfur dioxide (SO_2) emission allowances for use with the U.S. Environmental Protection Agency's (EPA's) annual SO_2 regional emission reduction program as established in the federal Cross-State Air Pollution Rule (CSAPR) for 2017 and beyond. The federal CSAPR program will continue to be administered by EPA. The state rule only redistributes annual SO_2 allowances.] have Missouri responsible for the Cross-State

Air Pollution Rule (CSAPR) Sulfur Dioxide (SO₂) Group 1 Trading Program rather than the U.S. Environmental Protection Agency to Missouri. This rule also provides the process to allocate allowances to affected units in Missouri for compliance with the CSAPR SO₂ Group 1 Trading Program. The evidence supporting the need for this [proposed rulemaking] rule, per section 536.016, RSMo, is a November 7, 2011 email [with agreement] between Empire District Electric Co. (Empire) and Kansas City Power and Light (KCP&L) and the November 26, 2014, [and] March 24, 2015, and February 8, 2018 affected industry meeting [conference call notes] summaries.

(1) Applicability. *[This rule shall apply to all Transport Rule (TR) sulfur dioxide (SO₂) Annual Group 1 units located in the state of Missouri.]*

(A) Unless otherwise noted in subsection (1)(B) of this rule, the provisions of 40 CFR 97.602 through 40 CFR 97.635 promulgated as of July 1, 2018 are hereby incorporated by reference as published by the Office of the Federal Register. Copies can be obtained from the U.S. Publishing Office Bookstore, 710 N. Capitol Street NW, Washington, DC 20401. This rule does not incorporate any subsequent amendments or additions.

(B) Exceptions to subsection (1)(A) of this rule are as follows:

1. The following provisions are not adopted by reference in subsection (1)(A) of this rule, nor are they replaced by any provisions in this rule:

- A. 40 CFR 97.611(a);
- B. 40 CFR 97.611(b)(1); and
- C. 40 CFR 97.612(a).

2. The following provisions are not adopted by reference in subsection (1)(A) of this rule, nor are they replaced by any provisions in this rule:

A. Any of the requirements imposed on any unit in Indian country within the borders of any state in the provisions of 40 CFR 97.602 through 40 CFR 97.635;

- B. 40 CFR 97.611(b)(2);
- C. 40 CFR 97.611(c)(5)(iii);
- D. 40 CFR 97.612(b);
- E. 40 CFR 97.621(h); and
- F. 40 CFR 97.621(j).

(2) Definitions.

(A) Definitions for key words and phrases used in this rule may be found in 40 CFR 97.602 and 40 CFR 97.603 *[promulgated as of July 1, 2014, and Federal Register Notice 79 FR 71663 promulgated on December 3, 2014, are hereby incorporated by reference as published by the Office of the Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, D.C. 20408]* as incorporated by reference in subsection (1)(A) of this rule.

(3) General Provisions. The general provisions for the Cross-State Air Pollution Rule (CSAPR) sulfur dioxide (SO₂) Group 1 Trading Program may be found in 40 CFR 97.604 through 40 CFR 97.628, which, unless listed in subsection (1)(B) of this rule, are incorporated by reference in subsection (1)(A) of this rule. Subsections (3)(A) and (3)(B) of *[T]*this rule replace/s/ the provisions of 40 *[Code of Federal Regulations (CFR)]* 97.611(a), 40 CFR 97.611(b)(1), and 40 CFR 97.612(a) *[promulgated as of June 30, 2014, and Federal Register Notice 79 FR 71663 promulgated on December 3, 2014, as published by the Office of the Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, D.C. 20408]* as incorporated by reference in subsection (1)(A) of this rule.

(A) Existing Units.

1. Annual Submittal. The director must submit to the U.S.

Environmental Protection Agency (EPA), in a format prescribed by the administrator, the *[TR]* CSAPR SO₂ *[Annual]* Group 1 allowances listed in Table I taking into account any modifications necessary in accordance with paragraph (3)(A)2. of this rule. This submittal must meet the following schedule:

A. By June 1, 2016, the director will submit to EPA allowances for *[TR]* CSAPR SO₂ *[Annual]* Group 1 units for the control periods in 2017 and 2018;

B. By June 1, 2017, the director will submit to EPA allowances for *[TR]* CSAPR SO₂ *[Annual]* Group 1 units for the control periods in 2019 and 2020;

C. By June 1, 2018, the director will submit to EPA allowances for *[TR]* CSAPR SO₂ *[Annual]* Group 1 units for the control periods in 2021 and 2022; and

D. By June 1, 2019, and June 1 of each year thereafter, the director will submit to EPA allowances for *[TR]* CSAPR SO₂ *[Annual]* Group 1 units for the control periods in the fourth year after the year in which the submission is made.

2. Non-operating Units. If a unit in Table I of this rule does not operate during two (2) consecutive control periods after 2014, the submittal made under paragraph (3)(A)1. of this rule will show zero (0) *[TR]* CSAPR SO₂ *[Annual]* Group 1 SO₂ allowances for such unit for the control period in the fifth year after these two (2) such years and in each year after that fifth year. All *[TR]* CSAPR SO₂ *[Annual]* Group 1 allowances that would otherwise have been allocated to such unit will be allocated to the new unit set-aside for the state for the respective years involved. If this subsection is applicable, any resulting changes to the submittal under paragraph (3)(A)1. of this rule will be determined in accordance with the following:

A. Every year, the director will review the operation of each unit listed in Table I and issue a notification that lists any unit in Table I that has not operated during two (2) consecutive control periods after 2014. Any notification made under this subparagraph will specify the first year in which allowances listed in Table I will be terminated for the applicable unit(s) under paragraph (3)(A)2. of this rule;

B. For each notification *[required]* in subparagraph (3)(A)2.A. of this rule, the director will provide an opportunity for submission of objections to the units referenced in such notice that must be submitted by the deadline specified in such notification in order to be considered; and

C. If there are objections, the director will review them and issue a notification responding to objections received along with any adjustments made to the list.

Table I

Source Name	Source ID	Unit ID	<i>[TR]</i> CSAPR SO₂ Group 1 unit allowances (tons) for 2017 and thereafter
Asbury	2076	1	4,480
Audrain Power Plant	55234	CT1	0
Audrain Power Plant	55234	CT2	0
Audrain Power Plant	55234	CT3	0
Audrain Power Plant	55234	CT4	0
Audrain Power Plant	55234	CT5	0
Audrain Power Plant	55234	CT6	0
Audrain Power Plant	55234	CT7	0
Audrain Power Plant	55234	CT8	0
Blue Valley	2132	3	452
Chamois Power Plant	2169	2	893
Chillicothe	2122	GT1A	0
Chillicothe	2122	GT1B	0
Chillicothe	2122	GT2A	1
Chillicothe	2122	GT2B	0
Columbia	2123	6	78
Columbia	2123	7	215
Columbia	2123	8	0
Columbia Energy Center (MO)	55447	CT01	0
Columbia Energy Center (MO)	55447	CT02	0
Columbia Energy Center (MO)	55447	CT03	0
Columbia Energy Center (MO)	55447	CT04	0
Dogwood Energy Facility	55178	CT-1	1
Dogwood Energy Facility	55178	CT-2	1
Empire District Elec Co Energy Ctr	6223	1	0
Empire District Elec Co Energy Ctr	6223	2	0
Empire District Elec Co Energy Ctr	6223	3A	1
Empire District Elec Co Energy Ctr	6223	3B	1
Empire District Elec Co Energy Ctr	6223	4A	1
Empire District Elec Co Energy Ctr	6223	4B	1
Essex Power Plant	7749	1	0
Fairgrounds	2082	CT01	1
Greenwood Energy Center	6074	1	1
Greenwood Energy Center	6074	2	0
Greenwood Energy Center	6074	3	0
Greenwood Energy Center	6074	4	1
Hawthorn	2079	5A	2,643
Hawthorn	2079	6	0
Hawthorn	2079	7	0
Hawthorn	2079	8	0
Hawthorn	2079	9	1
Higginsville Municipal Power Plant	2131	4A	0
Higginsville Municipal Power Plant	2131	4B	0
Holden Power Plant	7848	1	0

Holden Power Plant	7848	2	1
Holden Power Plant	7848	3	0
Howard Bend	2102	CT1A	1
Howard Bend	2102	CT1B	1
Iatan	6065	1	9,833
James River	2161	GT1	0
James River	2161	GT2	0
James River	2161	3	747
James River	2161	4	847
James River	2161	5	1,566
John Twitty Energy Center	6195	1	2,883
John Twitty Energy Center	6195	CT1A	0
John Twitty Energy Center	6195	CT1B	0
John Twitty Energy Center	6195	CT2A	0
John Twitty Energy Center	6195	CT2B	0
Labadie	2103	1	9,056
Labadie	2103	2	9,265
Labadie	2103	3	9,633
Labadie	2103	4	9,929
Lake Road	2098	6	1,490
Lake Road	2098	GT5	2
McCartney Generating Station	7903	MGS1A	0
McCartney Generating Station	7903	MGS1B	0
McCartney Generating Station	7903	MGS2A	0
McCartney Generating Station	7903	MGS2B	0
Meramec	2104	1	2,326
Meramec	2104	2	2,192
Meramec	2104	3	3,869
Meramec	2104	4	5,394
Meramec	2104	CT01	1
Meramec	2104	CT2A	0
Meramec	2104	CT2B	0
Mexico	6650	CT01	1
Moberly	6651	CT01	2
Montrose	2080	1	2,608
Montrose	2080	2	2,555
Montrose	2080	3	2,684
Moreau	6652	CT01	1
New Madrid Power Plant	2167	1	8,190
New Madrid Power Plant	2167	2	7,628
Nodaway Power Plant	7754	1	0
Nodaway Power Plant	7754	2	0
Northeast Generating Station	2081	11	0
Northeast Generating Station	2081	12	0
Northeast Generating Station	2081	13	0
Northeast Generating Station	2081	14	0
Northeast Generating Station	2081	15	0
Northeast Generating Station	2081	16	0
Northeast Generating Station	2081	17	1
Northeast Generating Station	2081	18	0

Peno Creek Energy Center	7964	CT1A	0
Peno Creek Energy Center	7964	CT1B	0
Peno Creek Energy Center	7964	CT2A	0
Peno Creek Energy Center	7964	CT2B	0
Peno Creek Energy Center	7964	CT3A	0
Peno Creek Energy Center	7964	CT3B	0
Peno Creek Energy Center	7964	CT4A	0
Peno Creek Energy Center	7964	CT4B	0
Ralph Green Station	2092	3	0
Rush Island	6155	1	9,492
Rush Island	6155	2	8,700
Sibley	2094	1	799
Sibley	2094	2	788
Sibley	2094	3	5,037
Sikeston	6768	1	4,564
Sioux	2107	1	6,743
Sioux	2107	2	6,083
South Harper Peaking Facility	56151	1	0
South Harper Peaking Facility	56151	2	0
South Harper Peaking Facility	56151	3	0
St. Francis Power Plant	7604	1	1
St. Francis Power Plant	7604	2	1
State Line (MO)	7296	1	0
State Line (MO)	7296	2-1	2
State Line (MO)	7296	2-2	3
Thomas Hill Energy Center	2168	MB1	2,982
Thomas Hill Energy Center	2168	MB2	4,665
Thomas Hill Energy Center	2168	MB3	9,621
Viaduct	2096	CT01	0

Total 160,959

Note: Being included or excluded on the list of sources in Table I does not constitute a determination that such source is or is not a *[TR] CSAPR SO₂ [Annual] Group 1* unit. The determination of applicability for *[TR] CSAPR SO₂ [Annual] Group 1* units is in 40 CFR 97.604 as incorporated by reference in subsection (1)(A) of this rule.

(B) New Units.

1. Annual Submittal. For the *[TR] CSAPR SO₂ [Annual] Group 1* control period in 2017 and each control period thereafter, the director must submit to EPA, in a format prescribed by the administrator, the *[TR] CSAPR SO₂ [Annual] Group 1* allowances as determined under this subsection by July 1 of the applicable control period.

2. New unit set-asides.

A. Allowance Calculation. Every year, the director will calculate the *[TR] CSAPR SO₂ [Annual] Group 1* allowance allocation to each *[TR] CSAPR SO₂ [Annual] Group 1* unit in a state, in accordance with subparagraphs (3)(B)3.B. through (3)(B)3.G. and (3)(B)3.L. of this rule, for the control period in the year of the applicable submittal deadline under paragraph (3)(B)1. of this rule. Once the calculations are complete, the director will contact all facilities that will receive allocations under subparagraphs (3)(B)3.B. through (3)(B)3.G. and (3)(B)3.L. of this rule for the control period in the year of the applicable submittal deadline under paragraph (3)(B)1. of this rule to confirm that the calculations were performed in accordance with this rule, and make adjustments to the calculations if necessary.

B. Excess Allowances. If the new unit set-aside for *[such] the* control period has any *[TR] CSAPR SO₂ [Annual] Group 1*

allowances remaining after the calculations performed under subparagraphs (3)(B)3.B. through (3)(B)3.G. and (3)(B)3.L. of this rule have been completed, then allowances will be calculated in accordance with subparagraph (3)(B)3.I. of this rule.

C. Industry Requests for Excess Allowances. If a facility owner, operator, or designated representative wishes to receive allowances in accordance with subparagraph (3)(B)3.I. of this rule, for any control period, then by April 5 of the applicable control period, the facility owner, operator, or designated representative must submit information to the director confirming that a *[TR] CSAPR SO₂ [Annual] Group 1* unit commenced commercial operation during the period starting January 1 of the year before the year of such control period and ending March 31 of the year of such control period. The submittal must also include the calculation of eligible allowances for use in subparagraph (3)(B)3.I. of this rule, for each *[TR] CSAPR SO₂ [Annual] Group 1* unit that commenced commercial operation during the period starting January 1 of the year before the year of such control period and ending March 31 of the year of such control period.

(I) The calculation of eligible allowances must be in accordance with part (3)(B)3.I.(III) of this rule in order for such units to be eligible to receive any allowances in accordance with subparagraph (3)(B)3.I. of this rule.

(II) Each year, the director will review any submissions made in accordance with this paragraph to confirm that units identified in the submissions are *[TR] CSAPR SO₂ [Annual] Group 1* units that commenced commercial operation during the period starting January 1 of the year before the year of such control period and ending March 31 of the year of such control period. The director will also confirm that the submission includes the correct calculations for eligible allowances in accordance with part (3)(B)3.I.(III) of this rule. If, during the review, the director identifies any discrepancies with the identified units or the calculations in a submission made in accordance with this paragraph, the director may request additional information from the facility owner, operator, or designated representative that made the submission. If additional information is requested, the facility owner, operator, or designated representative must provide the requested information by the deadline specified in the information request; otherwise, units identified in such submission will not be eligible for allowances in accordance with subparagraph (3)(B)3.I. of this rule for the applicable control period.

D. Public Notification. The director will determine the *[TR] CSAPR SO₂ [Annual] Group 1* allowance allocation to each *[TR] CSAPR SO₂ [Annual] Group 1* unit in accordance with subparagraphs (3)(B)3.I., (3)(B)3.J., and (3)(B)3.L. of this rule and 40 CFR 97.606(b)(2) and 40 CFR 97.630 through 40 CFR 97.635 as incorporated by reference in subsection (1)(A) of this rule. By June 1 of each year, the director will issue a notification making available the results of all allowance determinations from the new unit set-aside for the control period in which the notification is made.

(I) For each notification *[required]* in *[part]* subparagraph (3)(B)2.D. *[III]* of this rule, the director will provide an opportunity for submission of objections to the calculations referenced in such notice.

(II) If there are objections, the director will review them and provide notification stating the outcome.

E. Allowance Changes. If any *[TR] CSAPR SO₂ [Annual] Group 1* allowances are added to the new unit set-aside after submissions *[as required in]* per subparagraph (3)(B)2.C. of this rule, the director will issue additional notifications, as deemed appropriate, of the allocation of such *[TR] CSAPR SO₂ [Annual] Group 1* allowances in accordance with subparagraph (3)(B)3.J. of this rule.

3. New Unit Annual Allowance Allocation Methodology. For each control period in 2017 and thereafter and for the *[TR] CSAPR SO₂ [Annual] Group 1* units in Missouri, the director will allocate *[TR] CSAPR SO₂ [Annual] Group 1* allowances to the *[TR] CSAPR SO₂ [Annual] Group 1* units as follows:

A. Units Eligible to Receive Allowances. The *[TR] CSAPR SO₂ [Annual] Group 1* allowances will be allocated to the following *[TR] CSAPR SO₂ [Annual] Group 1* units, except as provided in subparagraph (3)(B)3.J. of this rule:

(I) *[TR] CSAPR SO₂ [Annual] Group 1* units that are not listed in Table I in paragraph (3)(A)2. of this rule;

(II) *[TR] CSAPR SO₂ [Annual] Group 1* units whose allocation of an amount of *[TR] CSAPR SO₂ [Annual] Group 1* allowances for such control period listed in Table I in paragraph (3)(A)2. of this rule is covered by 40 CFR 97.611(c)(2) or (3) as incorporated by reference in subsection (1)(A) of this rule;

(III) *[TR] CSAPR SO₂ [Annual] Group 1* units that are listed in Table I in paragraph (3)(A)2. of this rule and the allocation to such unit(s) is terminated for the applicable control period pursuant to paragraph (3)(A)2. of this rule, and that operate during the control period immediately preceding such control period; or

(IV) For purposes of subparagraph (3)(B)3.I. of this rule, *[TR] CSAPR SO₂ [Annual] Group 1* units under 40 CFR 97.611(c)(1)(ii) whose allocation of an amount of *[TR] CSAPR SO₂ [Annual] Group 1* allowances for such control period under paragraph (3)(B)2. of this rule is covered by 40 CFR 97.611(c)(2) or (3) as incorporated by reference in subsection (1)(A) of this rule;

B. Total Allowances Available. The director will establish a separate new unit set-aside for the state for each such control period.

Each such new unit set-aside will be allocated *[TR] CSAPR SO₂ [Annual] Group 1* allowances in an amount equal to the difference between the Missouri *[TR] CSAPR SO₂ [Annual] Group 1* trading budget for 2017 and thereafter, as set forth in 40 CFR 97.610(a) as incorporated by reference in subsection (1)(A) of this rule, and the total number of allowances allocated in accordance with paragraph (3)(A)1. of this rule for such control period. The new unit set-aside will be allocated additional *[TR] CSAPR SO₂ [Annual] Group 1* allowances (if any) in accordance with paragraph (3)(A)2. of this rule and 40 CFR 97.611(c)(5) as incorporated by reference in subsection (1)(A) of this rule;

C. Eligible Control Periods. The director will determine, for each *[TR] CSAPR SO₂ [Annual] Group 1* unit described in subparagraph (3)(B)3.A. of this rule, an allocation of *[TR] CSAPR SO₂ [Annual] Group 1* allowances for the later of the following control periods and for each subsequent control period:

(I) The control period in 2017;

(II) The first control period after the control period in which the *[TR] CSAPR SO₂ [Annual] Group 1* unit commences commercial operation;

(III) For a unit described in part (3)(B)3.A.(II) of this rule, the first control period in which the *[TR] CSAPR SO₂ [Annual] Group 1* unit operates in the state after operating in another jurisdiction and for which the unit is not already allocated one (1) or more *[TR] CSAPR SO₂ [Annual] Group 1* allowances; and

(IV) For a unit described in part (3)(B)3.A.(III) of this rule, the first control period after the control period in which the unit resumes operation, or the first control period in which the allocation for such unit listed in Table I in paragraph (3)(A)2. of this rule is terminated pursuant to paragraph (3)(A)2. of this rule, whichever is later;

D. Allocations. The allocation to each *[TR] CSAPR SO₂ [Annual] Group 1* unit described in parts (3)(B)3.A.(I) through (3)(B)3.A.(III) of this rule and for each control period described in subparagraph (3)(B)3.C. of this rule will be an amount equal to the unit's total tons of SO₂ emissions during the immediately preceding control period. The director will adjust the allocation amount in this subparagraph in accordance with subparagraphs (3)(B)3.E. through (3)(B)3.G. and (3)(B)3.L. of this rule;

E. Sum of Allowances. The director will calculate the sum of the *[TR] CSAPR SO₂ [Annual] Group 1* allowances determined for all such *[TR] CSAPR SO₂ [Annual] Group 1* units under subparagraph (3)(B)3.D. of this rule in the state for such control period;

F. Extra Allowance Allocation. If the amount of *[TR] CSAPR SO₂ [Annual] Group 1* allowances in the new unit set-aside for the state for such control period is greater than or equal to the sum under subparagraph (3)(B)3.E. of this rule, then the director will allocate the amount of *[TR] CSAPR SO₂ [Annual] Group 1* allowances determined for each such *[TR] CSAPR SO₂ [Annual] Group 1* unit under subparagraph (3)(B)3.D. of this rule;

G. Insufficient Allowance Allocation. If the amount of *[TR] CSAPR SO₂ [Annual] Group 1* allowances in the new unit set-aside for the state for such control period is less than the sum under subparagraph (3)(B)3.E. of this rule, then the director will allocate to each such *[TR] CSAPR SO₂ [Annual] Group 1* unit the amount of the *[TR] CSAPR SO₂ [Annual] Group 1* allowances determined under subparagraph (3)(B)3.D. of this rule for the unit, multiplied by the amount of *[TR] CSAPR SO₂ [Annual] Group 1* allowances in the new unit set-aside for such control period, divided by the sum under subparagraph (3)(B)3.E. of this rule, and rounded to the nearest allowance;

H. Confirmation of Allowances. The director will contact facilities as described in subparagraph (3)(B)2.A. of this rule to confirm the amount of *[TR] CSAPR SO₂ [Annual] Group 1* allowances allocated under subparagraphs (3)(B)3.B. through (3)(B)3.G. and (3)(B)3.L. of this rule for such control period to each *[TR] CSAPR SO₂ [Annual] Group 1* unit eligible for such allocation;

I. Allowance Calculation for Units That Recently Began

Operation. If, after completion of the procedures under subparagraphs (3)(B)3.E. through (3)(B)3.H. of this rule for such control period, any unallocated *[TR] CSAPR SO₂ [Annual] Group 1* allowances remain in the new unit set-aside for the state for such control period, the director will allocate such *[TR] CSAPR SO₂ [Annual] Group 1* allowances as follows:

(I) For any submission made in accordance with subparagraph (3)(B)2.C. of this rule, the submitting facility owner, operator, or designated representative may include the calculation of eligible allowances for such control period as specified in part (3)(B)3.I.(III) of this rule. If such submission is not made or fails to include the calculation of eligible allowances under this part by the April 5 deadline, or if the facility owner, operator, or designated representative fails to provide additional information requested in accordance with part (3)(B)2.C.(II) of this rule by the applicable deadline; then no allowances will be awarded to such unit in accordance with this subparagraph for such control period;

(II) The director will review submissions made in accordance with subparagraph (3)(B)2.C. of this rule, as specified in part (3)(B)2.C.(II) of this rule and may adjust the units identified in such submission if they are not eligible for allowances under this subparagraph, and the director may also adjust the calculation of eligible allowances included in such submission to ensure they are in accordance with part (3)(B)3.I.(III) of this rule;

(III) The calculation of eligible *[TR] CSAPR SO₂ [Annual] Group 1* allowances for a specific control period for *[TR] CSAPR SO₂ [Annual] Group 1* units that commenced commercial operation during the period starting January 1 of the year before the year of such control period and ending March 31 of the year of such control period must be as follows;

$$EA = \frac{(ER)(HR)(NP_{Cap})(CP_{Tot})(CF)(24\text{hours}/\text{day})(1,000\text{kW}/MWe)}{(2,000\text{lb}/\text{ton})(1,000,000\text{BTU}/\text{mmBTU})}$$

Where:

EA = eligible *[TR] CSAPR SO₂ [Annual] Group 1* Allowances
ER = the unit's permitted emission rate from the unit's construction permit approved under 10 CSR 10-6.060 (lb/mmBTU)
HR = the heat rate efficiency for the generator that the unit serves (BTU/kW-hr)
NP_{Cap} = nameplate capacity of the generator that the unit serves (MWe)
CP_{Tot} = number of days in the control period
CF = the unit's default capacity factor from Table II below

Table II – Default Capacity Factors for New Units

Unit Types	Annual SO ₂ & NO _x Programs	<i>[Ozone Season NO_x Program]</i>
Coal-Fired Steam Boiler	0.85	0.92
IGCC (Coal Gasification)	0.74	0.73
Oil-Fired Steam Boiler	0.30	0.39
Natural Gas-Fired Steam Boiler	0.44	0.47
Simple Cycle Combustion Turbine	0.24	0.32
Combined Cycle Combustion Turbine	0.66	0.71]

(IV) The director will determine, for each unit described in subparagraph (3)(B)3.A. of this rule that commenced commercial operation during the period starting January 1 of the year before the year of such control period and ending March 31 of the year of such control period, the positive difference (if any) between the unit's emissions during the previous control period and the amount of eligible *[TR] CSAPR SO₂ [Annual] Group 1* allowances as calculated

under part (3)(B)3.I.(III) of this rule;

(V) The director will determine the sum of the positive differences determined under part (3)(B)3.I.(IV) of this rule;

(VI) If the amount of unallocated *[TR] CSAPR SO₂ [Annual] Group 1* allowances remaining in the new unit set-aside for the state for such control period is greater than or equal to the sum determined under part (3)(B)3.I.(V) of this rule, then the director will allocate the amount of *[TR] CSAPR SO₂ [Annual] Group 1* allowances determined for each such *[TR] CSAPR SO₂ [Annual] Group 1* unit under part (3)(B)3.I.(IV) of this rule; and

(VII) If the amount of unallocated *[TR] CSAPR SO₂ [Annual] Group 1* allowances remaining in the new unit set-aside for the state for such control period is less than the sum under part (3)(B)3.I.(V) of this rule, then the director will allocate to each such *[TR] CSAPR SO₂ [Annual] Group 1* unit the amount of the *[TR] CSAPR SO₂ [Annual] Group 1* allowances determined under part (3)(B)3.I.(IV) of this rule for the unit, multiplied by the amount of unallocated *[TR] CSAPR SO₂ [Annual] Group 1* allowances remaining in the new unit set-aside for such control period, divided by the sum under part (3)(B)3.I.(V) of this rule, and rounded to the nearest allowance;

J. Distribution of Remaining Allocations. If, after completion of the procedures under subparagraphs (3)(B)3.I. and (3)(B)3.L. of this rule for such control period, any unallocated *[TR] CSAPR SO₂ [Annual] Group 1* allowances remain in the new unit set-aside for the state for such control period, the director will allocate to each *[TR] CSAPR SO₂ [Annual] Group 1* unit that is in the state, is allocated an amount of *[TR] CSAPR SO₂ [Annual] Group 1* allowances listed in Table I in paragraph (3)(A)2. of this rule, and continues to be allocated *[TR] CSAPR SO₂ [Annual] Group 1* allowances for such control period in accordance with paragraph (3)(A)2. of this rule, an amount of *[TR] CSAPR SO₂ [Annual] Group 1* allowances equal to the following: the total amount of such remaining unallocated *[TR] CSAPR SO₂ [Annual] Group 1* allowances in such new unit set-aside, multiplied by the unit's allocation listed in Table I in paragraph (3)(A)2. of this rule for such control period, divided by the remainder of the amount of tons in the applicable state SO₂ Annual trading budget minus the amount of tons in such new unit set-aside for the state for such control period, and rounded to the nearest allowance;

K. Public Notification. The director will issue notifications as described in subparagraphs (3)(B)2.D. and (3)(B)2.E. of this rule, of the amount of *[TR] CSAPR SO₂ [Annual] Group 1* allowances allocated under subparagraphs (3)(B)3.B. through (3)(B)3.G., (3)(B)3.I., (3)(B)3.J., and (3)(B)3.L. of this rule for such control period to each *[TR] CSAPR SO₂ [Annual] Group 1* unit eligible for such allocation; and

L. Allocation Tabulations That Exceed or Are Less Than the New Unit Set-Aside.

(I) Notwithstanding the requirements of subparagraphs (3)(B)3.B. through (3)(B)3.K. of this rule, if the calculations of allocations of a new unit set-aside for a control period in a given year under subparagraph (3)(B)3.G. of this rule, subparagraph (3)(B)3.F. and part (3)(B)3.I.(VII) of this rule, or subparagraph (3)(B)3.F., part (3)(B)3.I.(VI), and subparagraph (3)(B)3.J. of this rule would otherwise result in total allocations of such new unit set-aside exceeding the total amount of such new unit set-aside, then the director will adjust the results of the calculations under subparagraph (3)(B)3.G., part (3)(B)3.I.(VII), or subparagraph (3)(B)3.J. of this rule, as applicable, as follows. The director will list the *[TR] CSAPR SO₂ [Annual] Group 1* units in descending order based on the amount of such units' allocations under subparagraph (3)(B)3.G., part (3)(B)3.I.(VII), or subparagraph (3)(B)3.J. of this rule, as applicable, and, in cases of equal allocation amounts, in alphabetical order of the relevant source's name and numerical order of the relevant unit's identification number, and will reduce each unit's allocation under subparagraph (3)(B)3.G., part (3)(B)3.I.(VII), or subparagraph (3)(B)3.J. of this rule, as applicable, by one (1) *[TR] CSAPR*

SO₂ [Annual] Group 1 allowance (but not below zero (0)) in the order in which the units are listed and will repeat this reduction process as necessary, until the total allocations of such new unit set-aside equal the total amount of such new unit set-aside.

(II) Notwithstanding the requirements of subparagraphs (3)(B)3.J. and (3)(B)3.K. of this rule, if the calculations of allocations of a new unit set-aside for a control period in a given year under subparagraph (3)(B)3.F., part (3)(B)3.I.(VI), and subparagraph (3)(B)3.J. of this rule would otherwise result in a total allocations of such new unit set-aside less than the total amount of such new unit set-aside, then the director will adjust the results of the calculations under subparagraph (3)(B)3.J. of this rule, as follows. The director will list the [TR] CSAPR SO₂ [Annual] Group 1 units in descending order based on the amount of such units' allocations under subparagraph (3)(B)3.J. of this rule and, in cases of equal allocation amounts, in alphabetical order of the relevant source's name and numerical order of the relevant unit's identification number, and will increase each unit's allocation under subparagraph (3)(B)3.J. of this rule by one (1) [TR] CSAPR SO₂ [Annual] Group 1 allowance in the order in which the units are listed and will repeat this increase process as necessary, until the total allocations of such new unit set-aside equal the total amount of such new unit set-aside.

(4) Reporting and Record Keeping.

(A) The monitoring, reporting, and record keeping provisions of the CSAPR SO₂ Group 1 Trading Program may be found in 40 CFR 97.630 through 40 CFR 97.635 as incorporated by reference in subsection (1)(A) of this rule.

(B) The director [shall] will maintain [TR] CSAPR SO₂ [Annual] Group 1 unit allowance records submitted to EPA for each [TR] CSAPR SO₂ [Annual] Group 1 control period for a minimum of five (5) years.

AUTHORITY: section 643.050, RSMo [Supp. 2013] 2016. Original rule filed May 15, 2015, effective Dec. 30, 2015. Amended: Filed June 21, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed amendment will begin at 9:00 a.m., September 27, 2018. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded to any interested person. Interested persons, whether or not heard, may submit a statement of their views until 5:00 p.m., October 4, 2018. Send online comments via the proposed rules web page www.dnr.mo.gov/proposed-rules, email comments to apcprulespn@dnr.mo.gov, or written comments to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176.

Title 10—DEPARTMENT OF NATURAL RESOURCES

Division 10—Air Conservation Commission

Chapter 6—Air Quality Standards, Definitions, Sampling and Reference Methods and Air Pollution Control Regulations for the Entire State of Missouri

PROPOSED AMENDMENT

10 CSR 10-6.390 Control of NO_x Emissions From Large Stationary

Internal Combustion Engines. The commission proposes to amend sections (1) through (5). If the commission adopts this rule action, the department intends to submit this rule amendment to the U.S. Environmental Protection Agency to replace the current rule that is in the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Proposed Rules website www.dnr.mo.gov/proposed-rules.

PURPOSE: This rule reduces emissions of oxides of nitrogen (NO_x) to ensure compliance with the federal NO_x control plan to reduce the transport of air pollutants. This rule establishes emission levels for large stationary internal combustion engines. This rule amendment will add a twenty-five (25)-ton exemption for spark-ignited (SI) internal combustion (IC) engines similar to the exemption currently in the rule for compression ignition (CI) IC engines, and clarify the reporting, recordkeeping, and compliance requirements that are applicable to units meeting the twenty-five (25)-ton threshold for both SI and CI affected units. At the same time, a list of compliance methods that sources can use to verify they are meeting the twenty-five (25)-ton threshold is being added. The Reporting and Record Keeping section of the rule will also be reformatted to make this section easier to read and understand, two (2) terms will be rephrased to remove the redundant word in each term, and annual reporting submittals to the Program will be removed to ease industry reporting burden. The emergency standby engine exemption in subsection (1)(B) will be clarified to allow for up to one hundred (100) hours per year for routing maintenance checks (including readiness testing). In addition, a statement addressing excessive emissions due to startup, shutdown, and malfunction conditions will be removed for consistency with the U.S. Environmental Protection Agency (EPA) start-up, shutdown, or malfunction (SSM) policy. Unnecessary use of restrictive words will be removed, definitions specific to this rule will be added, and incorporations by reference will be updated or added as applicable. Lastly, the monitoring requirements in General Provisions section of the rule will be moved to the Test Methods section to meet standard Air Pollution Control Program rule formatting. The evidence supporting the need for this proposed rulemaking, per 536.016, RSMo, are an email dated March 8, 2013 from the St. Louis County Local Air agency concerning interpretation of the rule; **Federal Register** Notice dated June 12, 2015 (80 FR 33840) with State Implementation Plan Call responding to petition on EPA's SSM policy; comments on 10 CSR 10-6.390 draft rulemaking text dated January 15, 2016 and January 21, 2016; and Executive Order 17-03 Red Tape Reduction Review and related comments.

(1) Applicability.

(A) This rule applies to any large stationary internal combustion engine **greater than one thousand three hundred (1,300) horsepower** located in the counties of Bollinger, Butler, Cape Girardeau, Carter, Clark, Crawford, Dent, Dunklin, Franklin, Gasconade, Iron, Jefferson, Lewis, Lincoln, Madison, Marion, Mississippi, Montgomery, New Madrid, Oregon, Pemiscot, Perry, Pike, Ralls, Reynolds, Ripley, St. Charles, St. Francois, St. Louis, Ste. Genevieve, Scott, Shannon, Stoddard, Warren, Washington, and Wayne [counties] and the City of St. Louis [greater than one thousand three hundred (1,300) horsepower] that—

[(A)]1. Emitted greater than one (1) ton per day of oxides of nitrogen (NO_x) on average during the period from May 1 through September 30 of 1995, 1996, or 1997; or

[(B)]2. [Begins] Began operation after September 30, 1997.

(B) Exemptions.

[(C)]1. Any stationary internal combustion (IC) engine that meets the definition of emergency standby engine in subsection (2)(C) of this rule, **with allowance for up to one hundred (100)**

hours per calendar year for operation during routine maintenance checks (including readiness testing), is exempt from this rule.

[(D)]2. *[Any compression-ignited stationary internal combustion engine that begins operation after September 30, 1997, and emits twenty-five (25) tons or less of NO_x during the period from May 1 through September 30 is exempt from the requirements in subparagraphs (3)(B)3. and (3)(B)4. of this rule but subject to the record-keeping and reporting requirements in section (4) of this rule.]* Any stationary IC engine that began operation after September 30, 1997, and emits twenty-five (25) tons or less of NO_x during the period from May 1 through September 30 is exempt from section (3) and subsection (5)(A) of this rule. The owner or operator of an exempt large stationary IC engine must demonstrate compliance with the twenty-five (25) ton exemption threshold using one (1) of the methods in subsection (5)(B) of this rule. This exemption will be based on the previous year NO_x emissions during the period from May 1 through September 30. If the exemption limit is exceeded, for any reason, the engine will be required to meet the applicable *[limits]* requirements in subsections (3)(A), (3)(B), (3)(C), and (3)(D) of this rule each year thereafter.

(2) Definitions. *[Definitions of certain terms used in this rule, other than those specified in this rule, may be found in 10 CSR 10-6.020.]*

(A) Compression ignition—A type of stationary internal combustion engine that is not a spark ignition engine.

(B) Diesel engine—A compression-ignited two (2)- or four (4)-stroke engine in which liquid fuel is injected into the combustion chamber and ignited when the air charge has been compressed to a temperature sufficiently high for auto-ignition.

(C) Dual fuel engine—Compression-ignited stationary internal combustion engine that is capable of burning liquid fuel and gaseous fuel simultaneously.

(D) Emergency standby engine—An internal combustion engine used only when normal electrical power or natural gas service is interrupted or for the emergency pumping of water for either fire protection or flood relief. An emergency standby engine may not be operated to supplement a primary power source when the load capacity or rating of the primary power source has been either reached or exceeded.

(E) Lean-burn engine—Any two (2)- or four (4)-stroke spark-ignited engine with greater than four percent (4%) oxygen in the engine exhaust.

(F) Rich-burn engine—A two (2)- or four (4)-stroke spark-ignited engine where the oxygen content in the exhaust stream before any dilution is one percent (1%) or less measured on a dry basis.

(G) Spark ignition (SI)—relating to either a gasoline-fueled engine or any other type of engine with a spark plug or other sparking device and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel is used for compression ignition and gaseous fuel (typically natural gas) is used as a primary fuel at an annual average ratio of less than two (2) parts diesel fuel to one-hundred (100) parts total fuel on an energy equivalent basis are spark ignition engines.

(H) Stationary internal combustion engine—Internal combustion engine of the reciprocating type that is either attached to a foundation at a facility or is designed to be capable of being carried or moved from one (1) location to another and remains at a single site at a building, structure, facility, or installation for more than twelve (12) consecutive months. Any engine(s) that replace(s) an engine at a site that is intended to perform the same or similar function as the engine replaced is included in calculat-

ing the consecutive time period. Nonroad engines and engines used solely for competition are not stationary IC engines.

(I) Utilization rate—The amount of an engine's capacity reported in horsepower-hours that is utilized.

(J) Definitions of certain terms used in this rule, other than those specified in this rule, may be found in 10 CSR 10-6.020.

(3) General Provisions.

(A) Emission Requirements.

1. For engines emitting more than one (1) ton per day of NO_x on average during the period from May 1 through September 30 in 1995, 1996, or 1997—

[(A)]A. An owner or operator of a large stationary internal combustion engine *[meeting the applicability of subsection (1)(A) of this rule shall calculate]* must use the following calculation to determine the allowable NO_x emission rate for each applicable engine and not exceed this emission rate limit for any ozone season thereafter using:

$$ER = (NO_{x \text{ act}}/UR) \times 1.102 \times 10^{-6} \times 0.1$$

where,

ER = the allowable emission rate for each engine in grams per horsepower-hour;

NO_{x act} = the highest actual NO_x emissions, reported in tons per control period, for the period from May 1 through September 30 for one of the years 1995, 1996, or 1997 based on the best available emission information for each engine; and

UR = the utilization rate in horsepower-hours during the same period as NO_{x act}

[(B)] An owner or operator of a large stationary internal combustion engine meeting the applicability of subsection (1)(B) of this rule shall not operate an engine to exceed the permitted emission rate or the following emission rate, whichever is more stringent:

1. For rich-burn SI engines 3.0 grams per horsepower-hour;
2. For lean-burn SI engines 3.0 grams per horsepower-hour;
3. For diesel engines 2.3 grams per horsepower-hour; or
4. For dual fuel engines 1.5 grams per horsepower-hour;]

[(C)]B. In lieu of subparagraph (3)(A)1.A. of this rule, [A]an owner or operator of a large stationary internal combustion engine may choose to establish a facility-wide NO_x emissions cap *[in lieu of compliance with subsection (3)(A) of this rule. If the owner or operator elects to comply with the requirements of subsection (3)(A), the owner or operator shall submit a commitment in writing no later than May 1, 2005, to the director stating the intent to comply with that subsection].* If the owner or operator commits to comply with this *[subsection]* subparagraph rather than *[subsection]* subparagraph (3)(A)1.A. of this rule, the owner or operator *[shall]* must submit the following to the director:

[1.](I) The facility-wide NO_x emissions from the year of data that would be used in *[subsection]* subparagraph (3)(A)1.A. of this rule on a *[unit-by-unit]* per engine basis;

[2.](II) The number of tons of NO_x emission reductions that would be required in *[subsection]* subparagraph (3)(A)1.A. of this rule on a *[unit-by-unit]* per engine basis;

[3.](III) A detailed inventory of all engines being used to comply with the NO_x emission cap including the:

[A.](a) Uncontrolled emission rate of all engines at the facility;

[B.](b) Controlled emission rate for all engines being controlled under the NO_x emissions cap;

[(C.)(c) Capacity of each engine at the facility; and
[(D.)(d) Utilization rate of each engine at the facility; and
[4.](IV) The controlled NO_x emissions from the facility during the control period, May 1 through September 30.

2. For engines that began operation after September 1997. An owner or operator of a large stationary internal combustion engine must not operate an engine to exceed the permitted NO_x emission rate or the following NO_x emission rate, whichever is more stringent:

A. For SI rich-burn engines, 3.0 grams per horsepower-hour;

B. For SI lean-burn engines, 3.0 grams per horsepower-hour;

C. For diesel engines, 2.3 grams per horsepower-hour; or

D. For dual fuel engines, 1.5 grams per horsepower-hour;

***[(D.)(B)* Reduced Energy Consumption Option.** To meet the requirements of *[subsection]* subparagraph (3)(A)1.A. or *[(3)(B)]* paragraph(3)(A)2. of this rule, the owner or operator of a large stationary internal combustion engine may take into account, as a portion of the required NO_x reductions, physical and quantifiable measures to increase energy efficiency, reduce energy demand, or increase use of renewable fuels for a particular engine.

***[(E.)(C)* Monitoring Requirements.** The owner or operator of a large stationary internal combustion engine must monitor for compliance in accordance with subsection (5)(A) of this rule.

[1. Any owner or operator meeting the applicability of section (1) of this rule shall not operate such equipment unless it is equipped with one (1) of the following:

A. A continuous emissions monitoring system (CEMS), which meets the applicable requirements of 40 CFR 60, subpart A, Appendix B, and complies with the quality assurance procedures specified in 40 CFR 60, Appendix F. The CEMS shall be used to demonstrate compliance with the applicable emission limit; or

B. A calculational and record keeping procedure based upon actual NO_x emissions testing and correlations with operating parameters. The installation, implementation, and use of such an alternate calculational and record keeping procedure must be approved by the director and EPA and incorporated into the SIP in writing prior to implementation.

2. The CEMS or approved alternate monitoring procedure shall be operated and maintained in accordance with an on-site CEMS or alternate monitoring plan approved by the director.]

***[(F.)(D)* Excess Emissions During Start-Up, Shutdown, or Malfunction.** If the owner or operator provides notice of excess emissions pursuant to state rule 10 CSR 10-6.050(3)(B), the director will determine whether the excess emissions are attributable to start-up, shutdown, or malfunction conditions, pursuant to rule 10 CSR 10-6.050(3)(C). *[If the director determines that the excess emissions cause an engine to exceed the applicable emission limits in this rule, the director will determine whether enforcement action is warranted, as provided in rule 10 CSR 10-6.050(3)(C). If the director determines that the excess emissions are attributable to a start-up, shutdown, or malfunction condition and does not warrant enforcement action, those emissions would not be included in the calculation of ozone season NO_x emissions.]*

[(4) Reporting and Record Keeping.

(A) Reporting Requirements. The owner or operator subject to this rule or to the exemption in subsection (1)(D) of this rule shall comply with the following requirements:

1. The owner or operator shall submit to the director the identification number and type of each unit subject to this rule or to the exemption in subsection (1)(D) of this rule, the name and address of the plant where the unit is located, and

the name and telephone number of the person responsible for demonstrating compliance with this rule before May 1, 2007;

2. The owner or operator shall submit an annual report documenting for each controlled unit or each unit subject to subsection (1)(D) of this rule the total NO_x emissions from May 1 through September 30 of each year to the director by November 1 of that year, beginning in 2007; and

3. The owner or operator of a unit subject to this rule or to the exemption in subsection (1)(D) of this rule and operating a CEMS shall submit an excess emissions monitoring systems performance report, in accordance with the requirements of 40 CFR 60.7(c) and 60.13.

(B) Record-Keeping Requirements. Any owner or operator of a unit subject to this rule or to the exemption in subsection (1)(D) of this rule shall maintain all records necessary to demonstrate compliance with this rule for a period of five (5) years at the plant at which the subject unit is located. The records shall be made available to the director upon request. The owner or operator shall maintain records of the following information for each day of the control period the unit is operated:

1. The identification number of each unit and the name and address of the plant where the unit is located for each unit subject to the requirements of this rule or to the exemption in subsection (1)(D) of this rule;

2. The calendar date of record;

3. The number of hours the unit is operated during each day including start-ups, shutdowns, malfunctions, and the type and duration of maintenance and repair;

4. The date and results of each emissions inspection;

5. A summary of any emissions corrective maintenance taken;

6. The results of all compliance tests; and

7. If a unit is equipped with a CEMS—

A. The identification of time periods during which NO_x standards are exceeded, the reason for the exceedance, and action taken to correct the exceedance and to prevent similar future exceedances; and

B. The identification of the time periods for which operating conditions and pollutant data were not obtained including reasons for not obtaining sufficient data and a description of corrective actions taken.]

(4) Reporting and Record Keeping. The owner or operator of a large stationary internal combustion engine subject to this rule or to the exemption in paragraph (1)(B)2. of this rule must comply with the following requirements in this section of the rule.

(A) Reporting Requirements.

1. Submit to the director the identification number and type of each engine subject to this rule or to the exemption in paragraph (1)(B)2. of this rule, the name and address of the plant where the engine is located, and the name and telephone number of the person responsible for demonstrating compliance with this rule;

2. Submit a report documenting for each engine the total NO_x emissions of the first full compliance period from May 1 through September 30 to the director by November 1 of that year; and

3. If an engine is equipped with a continuous emission monitoring system (CEMS), submit an excess emissions monitoring systems performance report, in accordance with the requirements of 40 CFR 60.7(c) and 60.13 as specified in 10 CSR 10-6.030(22); and

(B) Record-Keeping Requirements.

1. Maintain all records necessary to demonstrate compliance with this rule for a period of five (5) years at the plant at which the subject engine is located which include the following;

A. Records for engines applying subsection (3)(B) of this rule;

B. Records verifying an engine(s) is subject to paragraph (3)(A)1. of this rule;

C. For engines subject to subparagraph (3)(A)1.B. of this rule, records required by parts (3)(A)1.B.(I) through (3)(A)1.B.(IV) of this rule;

D. Records for engines subject to paragraphs (5)(A)1. and (5)(A)2. of this rule; and

E. Records for engines subject to paragraphs (5)(B)1. through (5)(B)4. of this rule.

2. Make the records available to the director upon request; and

3. Maintain records of the following information for each day of the control period the engine is operated:

A. The identification number of each applicable engine and the name and address of the plant where the engine is located;

B. The calendar date of record;

C. The number of hours the engine is operated during each day including start-ups, shutdowns, malfunctions, and the type and duration of maintenance and repair;

D. Where applicable, the date and results of any inspection that affect emissions;

E. Where applicable, a summary of any corrective maintenance taken that affect emissions;

F. Where applicable, the results of all compliance tests; and

G. If an engine is equipped with a CEMS—

(I) The identification of time periods during which NO_x standards are exceeded, the reason for the exceedance, and action taken to correct the exceedance and to prevent similar future exceedances; and

(II) The identification of the time periods for which operating conditions and pollutant data were not obtained including reasons for not obtaining sufficient data and a description of the corrective actions taken.

(5) Test Methods. *[(Not Applicable)]*

(A) The owner or operator of a large stationary internal combustion engine meeting the applicability requirements of subsection (1)(A) of this rule and not exempt under subsection (1)(B) of this rule, must not operate such equipment unless one (1) of the following is met:

1. When a CEMS is installed which meets the requirements of 40 CFR 60, Appendix B and F as specified in 10 CSR 10-6.030(22)—The CEMS must be used to demonstrate compliance with the applicable emission limit and operated and maintained in accordance with the on-site CEMS requirements; or

2. For an alternate monitoring method consisting of a calculational and record keeping procedure based upon actual NO_x emissions testing and correlations with operating parameters, the installation, implementation, and use of such an alternate monitoring method must be approved by the director and the U.S. Environmental Protection Agency (EPA); and incorporated into this rule and the state implementation plan (SIP) prior to implementation. The alternate monitoring method must be operated and maintained in accordance with the approved alternate monitoring plan.

(B) One (1) of the following emissions measurement approaches must be used to provide a demonstration of compliance with the twenty-five (25)-ton exemption threshold for stationary IC engines under paragraph (1)(B)2. of this rule:

1. Certificates of conformity for affected engines confirming compliance with 40 CFR 90, 40 CFR 1048, or 40 CFR 1054 promulgated as of July 1, 2018, and hereby incorporated by reference in this rule, as published by the Office of the Federal Register. Copies can be obtained from the U.S. Publishing Office

Bookstore, 710 N. Capitol Street NW, Washington, DC 20401 (This rule does not incorporate any subsequent amendments or additions); and operating the engine according to the manufacturer's specifications;

2. Stack tests as specified in 10 CSR 10-6.030(22);

3. Engine manufacturer technical specification sheets for affected engines; or

4. Other methods, as approved by the director and the EPA; and incorporated into this rule and the SIP prior to implementation. These may include fuel usage calculations, approved engineering calculations, other methods described in permits, or other EPA documentation.

AUTHORITY: section 643.050, RSMo [Supp. 2012] 2016. Original rule filed Feb. 14, 2005, effective Oct. 30, 2005. Amended: Filed Aug. 27, 2009, effective May 30, 2010. Amended: Filed March 13, 2013, effective Oct. 30, 2013. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed amendment will begin at 9:00 a.m., September 27, 2018. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded to any interested person. Interested persons, whether or not heard, may submit a statement of their views until 5:00 p.m., October 4, 2018. Send online comments via the proposed rules web page www.dnr.mo.gov/proposed-rules, email comments to apcprulespn@dnr.mo.gov, or written comments to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176.

Title 10—DEPARTMENT OF NATURAL RESOURCES Division 22—Dam and Reservoir Safety Council Chapter 1—[Organization,] Definitions [and Immunity]

PROPOSED AMENDMENT

10 CSR 22-1.020 Definitions. The council is amending the chapter title and making changes to two (2) definitions in the rule, sections (13) and (43).

PURPOSE: The rule changes are being made to correct previous errors in the definitions and to remove language which is restated in Statute.

(13) Dam means any artificial or man-made barrier which does or may impound water and which impoundment has or may have a surface area of fifteen (15) or more acres of water at the water storage elevation or which is thirty-five feet (35') or more in height from the natural bed of the stream or watercourse or lowest point on the toe of the dam (whichever is lower) up to the crest elevation, together with appurtenant works. Sections 236.400 to 236.500, RSMo shall not apply to any dam which is not or will not be **thirty-five feet (35')** or in excess of thirty-five feet (35') in height or to any dam or reservoir licensed and operated under the Federal Power Act.

(43) Registration permit means a permit issued for a period not to exceed five (5) years by the council to the owner of a dam or reservoir in existence or in the progress of construction on August 13,

1981 or which becomes subject to the law for the dams and reservoirs by a change in factors or circumstances subsequent to that date. *[Permits shall only be issued for dams which are in a properly maintained condition or which have made and complied with recommendation for corrections of observed defects of the dam or reservoir and have been examined and approved in accordance with the law.]*

AUTHORITY: sections 236.405[, RSMo Supp. 1993] and 236.415, RSMo [1986] 2016. Original rule filed April 14, 1981, effective Aug. 13, 1981. Amended: Filed June 14, 1984, effective Jan. 1, 1985. Amended: Filed Sept. 1, 1993, effective May 9, 1994. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Department of Natural Resources, Ryan Stack, Dam and Reservoir Safety Program, PO Box 250, Rolla, MO 65401 or to ryan.stack@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 12, 2018 at 5:00 p.m. A public hearing is scheduled for 10:00 a.m. on September 5, 2018, at the Department of Natural Resources, III Fairgrounds Road, Rolla Mo 65402.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 22—Dam and Reservoir Safety Council
Chapter 2—Permits**

PROPOSED AMENDMENT

10 CSR 22-2.010 Who Needs a Permit. The council is amending section (3), deleting section (5), and renumbering thereafter.

PURPOSE: The changes correct the rule to properly define regulated height of dams to include thirty-five feet (35') and higher in section (3) and to remove language restated in statute from section (5).

(3) Agricultural dams are exempted from all permit requirements as long as the agricultural dam and reservoir continue to be used primarily for agricultural purposes (see 10 CSR 22-1.020(2)). The owners of agricultural dams and reservoirs *[over]* thirty-five feet (35') **and higher** in height must notify the council of their reliance on this exemption and their basis for application of this exemption to their dams. If an agricultural dam and reservoir is constructed after the effective date of the law, but subsequently becomes subject to the provisions of the law, the owner shall provide, prior to obtaining a registration permit, evidence that the dam meets the construction permit criteria in effect at the time the dam was constructed.

[[5) Dams and reservoirs that were designed by and the construction monitored by an agency engineer (see 10 CSR 22-1.020(1)) do not need a construction permit but a set of plans shall be filed with the chief engineer prior to the initiation of any construction activity. These dams and reservoirs are required to have a registration or safety permit subsequent to construction.]

[[6)](5) Industrial water retention dams (see 10 CSR 22-1.020(27)) and reservoirs regulated by another state agency or federal agency are exempted from all permit requirements. For the exemption to apply,

the industrial water retention dam and reservoir must be subject to safety inspections by the other state agency or federal agency and standards used must be at least as stringent as those required by the law. In addition, the owner must notify the council that another agency is regulating his/her dam and reservoir and explain the basis for the exemption to apply.

AUTHORITY: sections 236.400, **236.405**, 236.415, 236.435, 236.440, and 236.465, RSMo [1986 and 236.405, RSMo Supp. 1993] 2016. Original rule filed April 14, 1981, effective Aug. 13, 1981. Amended: Filed June 14, 1984, effective Jan. 1, 1985. Amended: Filed Sept. 1, 1993, effective May 9, 1994. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Department of Natural Resources, Ryan Stack, Dam and Reservoir Safety Program, PO Box 250, Rolla, MO 65401 or to ryan.stack@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 12, 2018 at 5:00 p.m. A public hearing is scheduled for 10:00 a.m. on September 5, 2018, at the Department of Natural Resources, III Fairgrounds Road, Rolla Mo 65402.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 22—Dam and Reservoir Safety Council
Chapter 2—Permits**

PROPOSED AMENDMENT

10 CSR 22-2.020 Types of Permits. The council is making changes to eliminate outdated language from sections (2) and (3).

PURPOSE: The changes eliminate language originally used for compliance of dams after the inception of the rules in 1981. The rules are no longer valid.

(2) Registration permits (see 10 CSR 22-1.020(44)) apply to and are required for the continued operation of a dam and reservoir that was in existence or in the process of being constructed on the effective date of this section, August 13, 1981. A registration permit also applies to and is required for structures which become subject to the provisions of the dam and reservoir safety law that were in existence prior to the date that they became subject to the law. Registration permits may be issued for a time period up to five (5) years. *[The owner of a dam and reservoir on the effective date of the law shall obtain his/her first registration permit in accordance with the height of his/her dam. For dam heights of thirty-five feet (35') to less than fifty feet (50'), fifty feet to seventy feet (50'–70') and over seventy feet (70+'), the maximum time to obtain the first registration permit is respectively within nine (9) years, four (4) years and two (2) years from the effective date of this section, August 13, 1981.]*

(3) Construction permits (see 10 CSR 22-1.020(8)) apply to the construction of a new dam and reservoir, the alteration, enlargement, reduction, repair, or removal of a new or existing dam, reservoir, or appurtenances. New dams are dams for which construction commences after the effective date of this section, August 13, 1981. *[For*

dams which were under construction on August 13, 1981, construction must be completed by August 13, 1987 or the owner will be required to obtain a construction permit. If completed prior to August 13, 1987, the owner will be required to obtain a registration permit as outlined in 10 CSR 22-2.020(2).] A construction permit may be issued for any reasonable length time period [required] in order to complete construction and it may contain appropriate restrictions placed on the owner for construction and operation of the dam and reservoir during that period. At the conclusion of construction, a safety or registration permit shall be obtained by the owner.

AUTHORITY: sections 236.400, **236.405**, 236.415, 236.435, 236.440, and 236.465, RSMo [1986 and 236.405, RSMo Supp. 1993] **2016**. Original rule filed April 14, 1981, effective Aug. 13, 1981. Amended: Filed June 14, 1984, effective Jan. 1, 1985. Amended: Filed May 15, 1987, effective Sept. 15, 1987. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Department of Natural Resources, Ryan Stack, Dam and Reservoir Safety Program, PO Box 250, Rolla, MO 65401 or to ryan.stack@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 12, 2018 at 5:00 p.m. A public hearing is scheduled for 10:00 a.m. on September 5, 2018, at the Department of Natural Resources, Ill Fairgrounds Road, Rolla Mo 65402.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 22—Dam and Reservoir Safety Council
Chapter 2—Permits

PROPOSED AMENDMENT

10 CSR 22-2.100 Appeal of Action on Permits. The council is amending section (2).

PURPOSE: The rule is being changed to reflect current technology and to provide various recording techniques.

(2) The record of hearing shall include all written testimony, data, records, etc., as well as all oral proceedings recorded [stenographically or by other means that will in order to preserve the testimony. Rules of discovery, evidence and privilege as applied in civil cases in the circuit courts shall be followed].

AUTHORITY: sections 236.405, [RSMo Supp. 1993 and] 236.415, 236.425, 236.440, 236.445, 236.470, and 236.480, RSMo [1986] **2016**. Original rule filed April 14, 1981, effective Aug. 13, 1981. Amended: Filed June 14, 1984, effective Jan. 1, 1985. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

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Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 22—Dam and Reservoir Safety Council
Chapter 3—Permit Requirements

PROPOSED AMENDMENT

10 CSR 22-3.020 General Requirements. The council is amending section (4) and titles of tables 1, 2, 3 and 5.

PURPOSE: To reduce redundant restrictive language.

(4) When the owner is applying for a construction permit, the [required] design factors of safety for slope stability for earth and rock conventional dams which are given in Table 1 shall be met. The required design factors of safety for concrete conventional dams are given in Table 2. The required design factors of safety for slope stability for industrial water retention dams are given in Table 3. Owners shall meet these requirements in the design of new dams prior to the issuance of the permit. Owners shall also meet these requirements when substantial changes are proposed to the height or slope of an existing conventional dam or structure prior to the issuance of the construction permit (see the following tables).

Table 1—[Required] Design Factors of Safety for Slope Stability Earth and Rock Conventional Dams

Loading Condition	Factor of Safety
End of construction, full reservoir*	1.4
Steady seepage, full reservoir*	1.5
Steady seepage, maximum reservoir**	1.3
Sudden draw down, from full to empty reservoir (if applicable)	1.2
Earthquake***, steady seepage, full reservoir*	1.0

*Full reservoir means water level is at the water storage elevation.

**Maximum reservoir means water level is at maximum water level attained during the spillway design flood or at the dam crest elevation, whichever is lower.

***Earthquake loading will vary according to dam location in relation to seismic source zones and downstream environmental zones. (See Table 4).

Table 2—[Required] Design Factors of Safety Concrete Conventional Dams

Failure Mode	Loading Condition	Factor of Safety
Overturning	full reservoir*	1.5
	maximum reservoir**	1.3
Sliding	full reservoir*	1.5
	maximum reservoir**	1.3
Structural integrity	full reservoir*	1.5
	maximum reservoir**	1.3
Earthquake*** any mode	full or maximum reservoir* & **	1.0

*Full reservoir means water level is at the water storage elevation.

**Maximum reservoir means water level is at maximum level attained during the spillway design flood.

***Earthquake loading will vary according to dam location in relation to seismic source zones and downstream environmental zones. (See Table 4).

Table 3—[Required] Design Factors of Safety for Slope Stability Industrial Water Retention Dams

Loading Condition	Factor of Safety
Starter dam, end of construction, full reservoir*	1.4
Any other stage of construction, full reservoir*, steady seepage	1.3
Any other stage of construction, maximum reservoir*, steady seepage	1.0
Completed dam, full reservoir*, steady seepage	1.5
Completed dam, maximum reservoir**, steady seepage	1.3
Earthquake***, steady seepage, full reservoir*	1.0

*Full reservoir means water level is at the water storage elevation.

**Maximum reservoir means water level is at the maximum level attained during the spillway design flood or at the dam crest elevation, whichever is lower.

***Earthquake loading will vary according to dam location in relation to seismic source zones and downstream environmental zones. (See Table 4).

Table 5—[Required] Spillway Design Flood Precipitation Values

Dam Type	Stage of Construction	Special Descriptions	Environmental Class		
			I	II	III
Conventional or Industrial	Completed	Any existing dam**	.75PMP*	.5PMP*	100 Yr. ****
	New dam less than 50 feet in height***		.75PMP*	.5PMP*	100 Yr. ****
	New dam greater than 50 feet in height		.75PMP*	.5PMP*	100 Yr. ****
Industrial	Starter dam	Any	.5PMP*	.2PMP*	.1PMP*
	After starter dam is finished and before final dam is completed	Any	.75PMP*	.5PMP*	.2PMP*

*PMP is Probable Maximum Precipitation.

**Existing dam means a dam which was completed by August 13, 1981 or which was started prior to August 13, 1981 and completed by August 13, 1987.

***See 10 CSR 22-2.020(3) for clarification.

****100 Yr. is the 100 year frequency rainfall event.

AUTHORITY: sections 236.400, 236.405, 236.415, 236.435, 236.440, and 236.465, RSMo [1986] 2016. Original rule filed April 14, 1981, effective Aug. 13, 1981. Amended: Filed June 14, 1984, effective Jan. 1, 1985. Amended: Filed Aug. 15, 1988, effective Jan. 1, 1989. Amended: Filed May 15, 1990, effective Nov. 30, 1990. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Department of Natural Resources, Ryan Stack, Dam and Reservoir Safety Program, PO Box 250, Rolla, MO 65401 or to ryan.stack@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 12, 2018 at 5:00 p.m. A public hearing is scheduled for 10:00 a.m. on September 5, 2018, at the Department of Natural Resources, III Fairgrounds Road, Rolla Mo 65402.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 22—Dam and Reservoir Safety Council
Chapter 3—Permit Requirements**

PROPOSED AMENDMENT

10 CSR 22-3.030 Registration Permit Requirements. The council is making changes to sections (1) and (2).

PURPOSE: To correct an error in section 1 of the current rule and to take out language discussing right of entry restated from statute.

(1) In addition to the basic requirements for all permits listed in 10 CSR 22-3.020(1), (2), (3), and (7), the registration permit application for a conventional dam and reservoir must include certification by an experienced professional engineer or an agency engineer that the dam and reservoir have been inspected in accordance with the law and that the owner has *[compiled]* **complied with the** engineer's recommendations to correct the observed defects and an inspection report, as required by the law. The engineer must further show that the spillway can safely pass the spillway design flood derived from Table 5 and submit a report describing the correction of all observed defects and the description of an operation and maintenance program to be followed while the registration permit is in effect.

(B) Proper maintenance and operation of a dam and reservoir are critical to the continuing safety of a dam and reservoir and to public safety, life and property. A maintenance program *[shall be]* is required and shall include the following items: erosion control on the embankment; monitoring emergency spillway flow rates; vegetation control; spillway maintenance; emergency action plans; maintenance and monitoring of seepage observation devices, if any; and maintenance and monitoring of instruments used, if any, to observe the stability of the dam.

(C) Visits for the purpose of observation of maintenance and operation may be made by the council, the chief engineer, or a member of the chief engineer's staff. Visits will be at any reasonable time following reasonable notice, except that in the case of an emergency threatening public safety, life, or property, *[no notice shall be required and]* inspection may be at any time. *[Owners shall permit entry to its property for persons to perform the inspections.]*

(2) In addition to the basic requirements for all permits listed in 10

CSR 22-3.020(1), (2), (3), and (7), the registration permit application for an industrial water retention dam and reservoir shall include certification by an experienced professional engineer or an agency engineer that the dam and reservoir have been inspected in accordance with the law and that the owner has complied with the engineer's recommendations to correct observed defects and an inspection report, as required by the law. The engineer must further show that the spillway can safely pass the spillway design flood derived from Table 5 and submit a report describing the correction of any observed defects, the operation and maintenance program to be made a part of the registration permit and the phased, stepped, and/or continuous construction of the dam.

(B) Proper maintenance and operation of a dam and reservoir are critical to the continuing safety of a dam and reservoir and the protection of public safety, life and property. A maintenance program *[shall be]* is required and shall include the following items: erosion control on the embankment; monitoring of storm runoff; vegetation control; spillway maintenance; emergency action plans; maintenance and monitoring of seepage observation devices, if any; and maintenance and monitoring of instruments used, if any, to observe the stability of the dam.

(C) The council or chief engineer may require the owner to submit a report describing the phased, stepped, and/or continuous construction of an industrial water retention dam and reservoir, containing information on the materials used, method of transport, and placement of materials, the sequence and placement location of materials, spillway changes to be made, the anticipated final dimensions and configuration of the dam and the name, address, and telephone number of the person(s) in responsible charge of this work.

(D) Visits for the purpose of inspecting during construction or enlargement or observation of maintenance and operation may be made by the council, the chief engineer or a member of the chief engineer's staff. Visits will be at any reasonable time following reasonable notice, except that in the case of an emergency threatening public safety, life or property, *[no such notice shall be required and]* inspection may be made at any time. *[Owners shall permit entry to its property for persons to perform inspection.]*

(G) The applicant need not state, nor is it necessary to show, that the dam is a safe dam. The intent of the registration permit is to show that the dam is performing adequately and that there are no readily observable indications that the dam is unsafe and that phased, stepped, and/or continuous construction of the dam will meet the requirements of the law.

AUTHORITY: sections 236.400, 236.405, 236.415, 236.420, 236.425, 236.440, and 236.465, RSMo [1986] 2016. Original rule filed April 14, 1981, effective Aug. 13, 1981. Amended: Filed June 14, 1984, effective Jan. 1, 1985. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Department of Natural Resources, Ryan Stack, Dam and Reservoir Safety Program, PO Box 250, Rolla, MO 65401 or to ryan.stack@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 12, 2018 at 5:00 p.m. A public hearing is scheduled for 10:00 a.m. on September 5, 2018, at the Department of Natural Resources, III Fairgrounds Road, Rolla Mo 65402.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 22—Dam and Reservoir Safety Council
Chapter 3—Permit Requirements

PROPOSED AMENDMENT

10 CSR 22-3.040 Construction Permit Requirements. The council is making changes to sections (1) and (2).

PURPOSE: To remove out of date portions of the rule and to remove right of entry language restated from statute.

(1) In addition to the basic requirements for all permits listed in 10 CSR 22-3.030, the construction permit application for a conventional dam and reservoir shall be prepared under the direction of and certified by an experienced professional engineer and shall be in accordance with practices reputable and appropriate in the engineering, geologic, and construction professions.

(A) The following *[requirements shall apply to and the following]* information shall be provided by the owner:

1. Up-to-date topographic map(s) showing the location of the proposed or existing dam, the upstream watershed, the reservoir, and the downstream environment zone. *[The topographic map(s) of the project area must be at a scale appropriate to the size of the project area.]* An up-to-date United States Geological Survey topographic map is considered a minimum;

2. Exploration records and results including the location of all exploration, especially in the area of the core trench, the method(s) used to explore the site, a record of what was found, the method(s) used to obtain samples, and the number of samples taken;

3. Testing records and results including information on the care and treatment of samples, types of tests performed on samples or *in situ*, reference(s) to or the procedures used in testing, and the test results. Physical and mechanical properties of foundation and construction materials must include the information source for these values especially if they are not the results of testing;

4. The geotechnical design procedure(s) or method(s) shall be identified and referenced or described so that they may be reviewed and the applicability verified. This shall include all assumptions made. The geotechnical procedure(s) or design results shall include the minimum computed factors of safety and they must meet or exceed the *[required]* design factors of safety (see 10 CSR 22-3.020(4)). The geotechnical design information shall be presented for the foundation, core trench, and dam embankment. Earthquake loading must be analyzed as outlined in 10 CSR 22-3.020(5) and (6);

5. The structural design procedure(s) or method(s) shall be identified and referenced or described so that they may be reviewed and their applicability verified. Design results for concreted dams and concrete structures appurtenant to embankment dams shall provide for and show an adequate factor of safety for normal and maximum loading conditions of compression, tension, shear, torsion, buckling, sliding, and overturning;

6. Hydrologic information used to evaluate the watershed, reservoir, spillway, and downstream environment zone including the watershed area, rainfall rate and duration, antecedent moisture conditions, time of concentration, area capacity curves, description of spillway elevation(s), type(s), dimensions, locations, cross section and profiles, dam crest elevation, and the downstream valley cross sections;

7. The hydrologic/hydraulic design procedure(s) or method(s) used shall be identified and referenced or described so that they may be reviewed and their applicability verified. This shall include all assumptions made. The hydrologic/hydraulic procedure(s) or design results shall include the reservoir inflow hydrograph, the reservoir outflow hydrograph, the spillway discharge capacity, the freeboard at the maximum water storage elevation, and the environmental class of the dam. The dam shall be capable of safely containing or discharging the required design flood (see 10 CSR 22-3.020(5));

8. Location and design of diversion channels or other structures to control stream flow during or after construction shall be provided if failure of these channels or other structures would affect hydrologic conditions of the dam. Stream diversion systems used during construction shall be designed to provide protection to the dam and the safety of the public;

9. Construction control and inspection procedures shall be used during the construction of a new dam and reservoir or modification of an existing dam and reservoir. Construction control and inspection procedures should include compaction testing and density testing;

10. Procedures shall be used for recordkeeping and monitoring throughout the construction or modification process to provide information about any construction progress and conditions that may cause difficulties during construction;

11. The location of and protective measures used in conjunction with all drain lines, sewer lines, utilities, or other structures that pass through or under the dam;

12. Topographic surveys showing the location of baselines, centerlines, and other horizontal and vertical control points sufficiently accurate to locate the proposed construction and to define the volume of storage in the reservoir;

13. Two (2) sets of plans and specifications including—

A. Graphic scales *[shall be provided]* for all scaled drawings;

B. The title, *[which shall be]* **displayed** identical on the plans and the specifications, shall include: the name of the dam; the name of the owner; whether the work shows an existing dam, a proposed dam or an enlargement, repair or alteration of the dam, or reservoir; the county(ies) the dam and reservoir are in; the location of the dam by quarter section, section, township and range, or by geodetic coordinates; and each sheet shall have in an appropriate title block the name of the dam as well as the sheet number in relation to the total, for example, sheet one (1) of twelve (12); and

C. Certifications by the experienced professional engineer and the owner *[shall be placed near the lower right-hand corner of the title sheet (first sheet) of the drawings. The certifications]* shall **be provided and** be similar to those presented in figures 1 and 2 (see figures 1 and 2); and

Figure 1

Certification by Experienced Professional Engineer

I hereby certify that these plans for the (insert the correct word or words choosing
from: existing; construction of the; repair of the; enlargement of the; or alteration of the
_____ Dam were prepared by me (or under my
Name of Dam
direct supervision) for the owners thereof.

Firm Name

Registered Engineer (Seal)

Figure 2

Certification by Owner

I, _____, owner, whose Post Office Address is
Name of Owner
_____, Zip _____, do
Owner's Address
hereby accept and approve these plans.

Owner

14. If a construction permit is requested to convert a dam to a retaining or retarding structure, the procedure to be followed in making the conversion shall be described by the owner; and

15. The procedures set up for regular inspection by the owner. The owner shall develop an emergency action plan, inspect his/her dam regularly and as necessary to protect public safety, life and property. A list of items to be inspected, a time schedule for these inspections and a form for reporting the results shall be established.

(B) The council or chief engineer may require the following action and information from the owner:

1. Procedures set up to provide regular maintenance and minor repairs to the dam and reservoir after construction and to continue or start recordkeeping and monitoring work so that the dam and reservoir are maintained in a safe condition and a complete history of its performance is available;

2. Location and types of instrumentation, drainage, and/or seepage control facilities. Monitoring equipment and drainage and seepage control facilities are recommended for all dams and reservoirs, however, depending on conditions, they may be mandatory items if necessary to accomplish the purposes of the law;

3. The downstream environment zone warning procedure to be used if dam failure is a threat. A downstream environment zone warning system is recommended for all dams and reservoirs, however, depending on conditions, it may be necessary to accomplish the purposes of the law. This would consist of the current name(s) of the dam and reservoir owners representative(s) responsible for giving notification of a threat of failure and the current phone numbers of appropriate local police and other persons having emergency assistance authority;

4. Upstream slope protection from wave action; and

5. Additional actions or information as required to protect public safety, life and property and to accomplish the purposes of the law.

(C) Visits for the purpose of inspecting during or after construction or observation of operation and maintenance may be made by the council, the chief engineer or a member of the chief engineer's staff. Visits will be at any reasonable time following reasonable notice, except that in the case of an emergency threatening public safety, life or property, *[no notice shall be required and]* inspection may be made at any time. *[Owners shall permit entry to their property for persons to perform inspections.]*

(2) In addition to the basic requirements for all permits listed in 10 CSR 22-3.020, the construction permit application for an industrial water retention dam and reservoir shall be prepared under the direction of and certified by an experienced professional engineer and shall be in accordance with practices reputable and appropriate in the engineering, geologic, and construction professions.

(B) Adequate records, as required by best practices in the geologic and engineering professions, shall be kept and made available to the council or chief engineer for the construction, maintenance, and operation procedures. Adequate instrumentation and monitoring of seepage water shall be provided where necessary. Any significant settling or movement in the foundation of the dam should be measured if possible. Trained personnel and adequate supervision shall be provided to insure the construction and operation of the dam and reservoir are carried out to specifications.

(C) The following *[requirements shall apply to and the following]* information shall be provided by the owner:

1. A description of the system used to deposit tailings on the dam;

2. Up-to-date topographic map(s) showing the location of the proposed dam, the upstream watershed, the reservoir, and the downstream environment zone. *[The topographic map(s) of the project area must be at a scale appropriate to the size of the project area.]* An up-to-date United States Geological Survey topographic map is considered minimum;

3. The location(s) of surface and underground mine workings if

these workings would cause, would contribute to the cause, or would be affected in the event of failure;

4. Exploration records and results including the location of all exploration, especially in the area of the core trench, the method(s) used to explore the site, a record of what was found, the method(s) used to obtain samples, and the number of samples taken;

5. Testing records and results including information on the care and treatment of samples, types of tests performed on samples or *in situ*, reference(s) to or the procedures used in testing, and the test results. Physical and mechanical properties of foundation and construction materials must include the information source for these values especially if they are not the results of testing;

6. The geotechnical design procedure(s) or method(s) shall be identified and referenced or described so that they may be reviewed and their applicability verified. This shall include all assumptions made. The geotechnical procedure(s) or design results shall include the minimum computed factors of safety and they must meet or exceed the *[required]* design factors of safety (see 10 CSR 22-3.020(4)). The geotechnical design information shall be presented for the foundation core trench and dam embankment. Earthquake loading must be analyzed as outlined in 10 CSR 22-3.020(5) and (6).;

7. Type and physical properties of the liquid and solid materials to be used in construction of the dam and contained in the reservoir;

8. The changes created in the downstream environment zone as the dam and reservoir become incrementally larger;

9. The embankment changes and new factors of safety for stability as the dam and reservoir become incrementally larger;

10. If a starter dam is used, whether it will be pervious or impervious;

11. The expected crest elevation, dam configuration, spillway elevation, and the size and configuration of each successive stage of the dam shall be included;

12. Anticipated storage volume of solid or semisolid materials and of liquids at the completion of the dam;

13. The structural design procedure(s) or method(s) shall be identified and referenced or described so that they may be reviewed and their applicability verified. Design results for concrete dams and concrete structures appurtenant to embankment dams shall provide for and show an adequate factor of safety for normal and maximum loading conditions of compression, tension, shear, torsion, buckling, sliding, and overturning;

14. Hydrologic information used to evaluate the watershed, reservoir, spillway, and downstream environment zone including the watershed area, rainfall rate and duration, antecedent moisture conditions, time of concentration, area capacity curves, description of spillway elevation(s), type(s), dimensions, locations, cross sections and profiles, dam crest elevation, and the downstream valley cross sections;

15. Hydrologic/hydraulic design procedure(s) or method(s) used shall be identified and referenced or described so that they may be reviewed and their applicability verified. This shall include all assumptions made. The hydrologic/hydraulic procedure(s) or design results shall include the reservoir inflow hydrograph, the reservoir outflow hydrograph, the spillway discharge capacity, the freeboard at the maximum water storage elevation and the environmental class of the dam. The dam shall be capable of safely containing or discharging the required design flood (see 10 CSR 22-3.020(5));

16. The hydrologic changes, the spillway alterations proposed, and the freeboard changes as the dam becomes incrementally larger;

17. Location and design of diversion channels or other structures to control stream flow during or after construction shall be provided if failure of these channels or other structures would affect the stability or hydrologic conditions of the dam. Stream diversion systems used during construction shall be designed to provide protection to the dam and to protect public safety, life and property;

18. Location and design of any diversion channels or other structures to control runoff or reclaimed water;

19. Construction control and inspection procedures shall be determined by the engineer and used during the construction of a new dam and reservoir or modification of an existing dam and reservoir. Construction control and inspection procedures shall include compaction testing and density testing and any other quality control measures used to insure compliance with the construction specifications;

20. Procedures shall be used for record-keeping and monitoring throughout the construction, enlargement, or modification process to provide information about any construction progress and conditions that may cause difficulties during construction;

21. The location of and protective measures used in conjunction with all drain lines, sewer lines, utilities, or other structures that pass through or under the dam;

22. Topographic surveys showing the location of baselines, centerlines, and other horizontal and vertical control points sufficiently accurate to locate the proposed construction and to define the volume of storage in the reservoir at each planned stage of construction;

23. Two (2) sets of plans and specifications including:

A. Graphic scales *[shall be provided]* for all scaled drawings;

B. The title, *[which shall be]* displayed identical on the plans and the specifications, shall include: the name of the dam; the name of the owner; whether the work shows an existing dam, a proposed dam or an enlargement, repair or alteration of the dam and reservoir; the county(ies) the dam and reservoir are in; the location of the dam by quarter section, section, township and range, or by geodetic coordinates; and each sheet shall have in an appropriate title block the name of the dam as well as the sheet number in relation to the total, for example, sheet one (1) of twelve (12); and

C. Certification by the experienced professional engineer and the owner shall be placed near the lower right-hand corner of the title sheet (first sheet) of the drawing. The certifications shall be as presented in figures 1 and 2 (see figures 1 and 2 preceding);

24. If a construction permit is requested to convert a dam to a retaining or retarding structure, the procedure to be followed in making the conversion shall be described by the owner; and

25. The procedure set up for regular inspection by the owner. The owner shall develop an emergency action plan, inspect his/her dam and reservoir regularly and as necessary to protect public safety, life and property. A list of items to be inspected, a time schedule for these inspections and a form for reporting the results shall be established by the council or chief engineer. Items that shall receive maintenance to and/or inspections on a daily basis during periods of active dam enlargement include: the spigots or cyclones; the decant lines; the position of the water pool in relation to the spillway, decant intake and crest of the tailings dam; drain lines checked for quantity of water and sediment; the embankment observed for visual defects such as slides or significant seepage changes; the spillway shall be checked to verify that it has not become blocked.

(D) The council or chief engineer may require the following action and information from the owner:

1. Procedures set up to provide regular maintenance and minor repairs to the dam and reservoir during construction and enlargement so that the dam and reservoir are maintained in a safe condition and a complete history of its performance is available;

2. Location and types of instrumentation, drainage, and/or seepage control facilities. Monitoring equipment and drainage and seepage control facilities are recommended for all dams and reservoirs, however, depending on conditions they may be mandatory items if necessary to accomplish the purposes of the law; a list of items to be inspected, a time schedule for these inspections, and a form for reporting the results shall be established by the council or chief engineer;

3. The downstream environment zone warning procedure to be used if dam failure is a threat. A downstream environment zone warning system is recommended for all dams and reservoirs, however, depending on conditions, it may be necessary to accomplish the purposes of the law. This would consist of the current name(s) of the

dam and reservoir owners representative(s) responsible for giving notification of a threat of failure and the current phone numbers of appropriate local police and other persons having emergency assistance authority;

4. Upstream slope protection from wave action; and

5. Additional actions or information as required to protect public safety, life and property and to accomplish the purposes of the law.

(E) Visits for the purpose of inspecting during or after construction or observation of operation and maintenance may be made by the council, the chief engineer, or member of the chief engineer's staff. Visits will be at any reasonable time following reasonable notice, except that in the case of an emergency threatening public safety, life or property, *[no notice shall be required and]* inspection may be made at any time. *[Owners shall permit entry to their property for the persons to perform inspections.]*

(F) Drawings to show changes shall be submitted when changes are made to the original plans including, without limitation, changes in incremental dam crest heights, spillway locations, and cross sections.

AUTHORITY: sections 236.400, 236.405, 236.415, 236.420, 236.425, 236.435, 236.440, and 236.465, RSMo [1986] 2016. Original rule filed April 14, 1981, effective Aug. 13, 1981. Amended: Filed June 14, 1984, effective Jan. 1, 1985. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Department of Natural Resources, Ryan Stack, Dam and Reservoir Safety Program, PO Box 250, Rolla, MO 65401 or to ryan.stack@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 12, 2018 at 5:00 p.m. A public hearing is scheduled for 10:00 a.m. on September 5, 2018, at the Department of Natural Resources, Ill Fairgrounds Road, Rolla Mo 65402.

Title 10—DEPARTMENT OF NATURAL RESOURCES Division 22—Dam and Reservoir Safety Council Chapter 3—Permit Requirements

PROPOSED AMENDMENT

10 CSR 22-3.050 Safety Permit Requirements. The council is making changes to sections (2) and (3).

PURPOSE: To make a correction and remove language restated from statute regarding right of entry.

(2) In addition to the basic requirements for all permits listed in 10 CSR 22-3.020, the application for a safety permit for an industrial water retention dam and reservoir shall include:

(A) Notification of completion of the starter dam or the initial phase of construction shall be prepared by or under the supervision of an experienced professional engineer and shall indicate that construction was performed in accordance with the provisions of the construction permit./;

(B) Notification of the completion of construction and application for the first safety permit for the dam and reservoir shall be provided by the owner. The experienced professional engineer who was in

responsible charge of the construction work shall certify that the construction was substantially in accordance with the approved plans and specifications. If revisions have been made which vary considerably from the provisions of the construction permit, it must be shown that the revisions do not endanger public safety, life or property. This subsection shall not be construed to excuse any person from the requirement to notify the council or chief engineer *[or]* of modifications or revisions prior to commencing the actions and to obtain the required permits or authorization therefore;

(C) Notification of completion shall be within two (2)[-] months time after completion of construction; and

(D) As-built drawings shall be submitted.

(3) Visits for the purpose of observation of operation and maintenance procedures may be made by the council, the chief engineer, or a member of their staff. Visits will be at any reasonable time following reasonable notice, except that in the case of an emergency threatening public safety, life or property, *[no notice shall be required and]* inspection may be made at any time. *[Owners shall permit entry to their property for such persons to perform the inspections.]*

AUTHORITY: sections 236.400, 236.405, 236.415, 236.420, 236.425, 236.440, and 236.465, RSMo [1986] 2016. Original rule filed April 14, 1981, effective Aug. 13, 1981. Amended: Filed June 14, 1984, effective Jan. 1, 1985. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Department of Natural Resources, Ryan Stack, Dam and Reservoir Safety Program, PO Box 250, Rolla, MO 65401 or to ryan.stack@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 12, 2018 at 5:00 p.m. A public hearing is scheduled for 10:00 a.m. on September 5, 2018, at the Department of Natural Resources, III Fairgrounds Road, Rolla Mo 65402.

Title 10—DEPARTMENT OF NATURAL RESOURCES Division 22—Dam and Reservoir Safety Council Chapter 4—Action Taken by Council and Chief Engineer

PROPOSED AMENDMENT

10 CSR 22-4.020 Enforcement Orders and Enforcement Procedures. The council is amending section (2).

PURPOSE: To remove language restated from statute.

(1) Enforcement orders shall be prepared by the chief engineer or council in cases where a dam or reservoir contains serious defects which pose a threat to public safety, life or property. Enforcement orders shall be sent to a dam owner by certified mail or served personally.

(2) If an owner does not initiate corrective actions to his/her dam and reservoir within thirty (30) days of the issuance of an enforcement order by the chief engineer or council, the council may request the attorney general or a prosecuting attorney to apply to the circuit court having jurisdiction to enforce compliance. *[Nothing in this section shall preclude the chief engineer from taking immediate*

action under 10 CSR 22-4.010(1) with respect to any dam or reservoir s/he has classified as dangerous to public safety, life or property.]

AUTHORITY: sections 236.400, 236.405, 236.410, 236.415, 236.445, and 236.450, RSMo [1986] 2016. Original rule filed June 14, 1984, effective Jan. 1, 1985. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Department of Natural Resources, Ryan Stack, Dam and Reservoir Safety Program, PO Box 250, Rolla, MO 65401 or to ryan.stack@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 12, 2018 at 5:00 p.m. A public hearing is scheduled for 10:00 a.m. on September 5, 2018, at the Department of Natural Resources, III Fairgrounds Road, Rolla Mo 65402.

Title 10—DEPARTMENT OF NATURAL RESOURCES Division 23—[Division of Geology and Land Survey] Well Installation

Chapter 1—Definitions [and Organizational Structure], Variances, and Permitting Requirements

PROPOSED AMENDMENT

10 CSR 23-1.010 Definitions. The board is amending the division name, chapter name, rule purpose, sections (1)–(26), removing sections (27)–(70), and renumbering as appropriate.

PURPOSE: The department is amending this rule to consolidate definitions found throughout all rule chapters (1–6) into one (1) definitions rule, adding sections for each letter in the alphabet for ease of finding terms, and renaming the chapter to Definitions, Variances, and Permitting Requirements to more accurately reflect what is being regulated.

PURPOSE: This rule defines [the words used in the text of the rules promulgated to implement the Water Well Drillers Law.] terms used in 10 CSR 23 that are not defined in section 256.603, RSMo.

(1) *[Abandoned well as defined in section 256.603, RSMo means a well shall be deemed abandoned when it is in such a state of disrepair that continued use for the purpose of thermal recovery or obtaining groundwater is impractical and the well has not been in use for a period of two (2) years or more. The term abandoned well includes a test hole or a monitoring well which was drilled in the exploration for minerals or for geological, water quality or hydrologic data from the time that it is no longer used for exploratory purposes and that has not been plugged in accordance with rules pursuant to sections 256.600—256.640, RSMo.] Terms beginning with the letter A.*

[(2)](A) Act means Missouri Water Well Drillers' [Law] Act, sections 256.600/—/256.640, RSMo, under which these rules are promulgated.

(B) Action level means the maximum permissible concentration of a contaminant in water pursuant to 10 CSR 60-2. Action levels are used for contaminants that do not have established maximum

contaminant levels.

(C) Alluvium means clay, silt, sand, gravel, or similar unconsolidated material deposited by a stream or body of running water.

[(3)](D) Annular space means the space between two (2)[-] cylindrical objects one (1) of which surrounds the other, such as the space between a [drill hole] borehole and a casing pipe or between a casing pipe and liner pipe.

[(4)](E) Applicant means any person who applies for a well, heat pump, monitoring well, or pump installation contractor permit pursuant to the law.

(F) Apprentice means any person who has been issued an apprentice permit who, under the supervision of a permitted nonrestricted well or pump installation contractor, is obtaining the knowledge, skills, and abilities necessary to apply for a non-restricted permit.

(G) Approval date means the date the record is reviewed and approved compliant with the construction requirements, not to be confused with certification or registration date.

[(5)] Application for permit means the application submitted by an applicant.]

[(6)](H) Aquifer means water-bearing geologic[al] material that transmits water in sufficient quantities to supply a well.

(I) Augered well means a well that is drilled by the rotation of a cylindrical tool.

(2) Terms beginning with the letter B.

[(7)](A) Bedrock means [competent] a general term for the solid rock [that is not weathered or fractured] that underlies soil or other unconsolidated surficial material.

[(8)](B) Bentonite means any type of sodium bentonitic clay used in well construction, or plugging of wells, which swells or expands when water is added.

(C) Bentonite slurry means a mixture of sodium bentonite and water that has a solids content of at least twenty percent (20%).

[(9)] Board as defined in section 256.603, RSMo means the body created in section 256.605, RSMo.]

(3) Terms beginning with the letter C.

[(10)](A) Casing means an impervious durable pipe placed in a well to prevent the [walls] borehole from [caving] collapsing and to [help seal off surface drainage or undesirable water, gas or other fluids to prevent their] prevent contaminants from entering the well.

(B) Cement slurry means mixture of cement and water that consists of one (1) ninety-four pound (94 lb.) bag of portland cement to six (6) gallons of water. Up to six percent (6%) bentonite may be used as an additive.

(C) Certification number means a number assigned to a record certifying compliance with 10 CSR 23 and sections 256.600-256.640, RSMo.

(D) Charitable or Benevolent Organization Water System means a public water system that exclusively serves a charitable or benevolent organization pursuant to section 640.116, RSMo.

[(11)] Casing Point Request form means a form that is supplied by the division and contains name and address information, type of well requested to be drilled, location information and other necessary information. The division uses the form to establish construction requirements, proposed total depth of well and proposed yield information for specific types of wells.

[(12)] Certification report as defined in section 256.603, RSMo means a form to be sent to the division upon completion of any well which shows the location, static water level,

total depth, initial pumpage, hole size, casing size and length, and name of well owner.

[(13)] Cesspool means an underground pit or container into which raw household sewage or other untreated liquid waste is discharged and from which the liquid seeps into the surrounding soil or is otherwise removed.]

[(14)](E) Chlorination [(disinfection)] means the use of [a] chlorine [solution] to disinfect or sterilize wells, pumps, storage tanks, or piping systems. [Chlorine is an oxidizing disinfectant that kills bacteria on contact.]

(F) Clean fill means uncontaminated inert solid material such as pea gravel, sand, drill cuttings, and agricultural lime.

(G) Completion date means the date the work, subject to these rules, is complete as follows:

1. For installation of water wells, the date the well has casing set and grouted and the well is drilled to total depth;

2. For pump installation, the date the pump is set and pump or service truck leaves the site;

3. For installation of heat pump systems, the date the last well in the well field has been drilled and grouted;

4. For installation of monitoring wells, the date when the well has the riser, screen, and surface completion installed;

5. For plugging of temporary monitoring wells, the date the first well is plugged; or

6. For plugging of water, monitoring, heat pump, and test hole wells, the date the well is plugged.

[(15)] Completion date means the date that the construction of a new well or repair of an existing well or the installation of a pump or the plugging of an abandoned well is completed. It shall not mean the date that payment is received for services provided.]

[(16)](H) Construction foundation data means [wells drilled to obtain construction foundation data and] wells or borings drilled in the construction phase of piers, shafts, caissons, mini-piles, soil and rock anchors, soil and rock grouting procedures on surface water containment structures [and other construction sites that utilize drilling within the structure to be built. The well or drill hole must be excavated and incorporated into the construction project or plugged full-length as a part of the construction project], pressure relief wells, roads, buildings, parking lots, or any drilling within the footprint of a proposed structure.

(I) Contaminant means any physical, chemical, biological, or radiological substance or matter in water that exceeds the maximum contaminant level or action level.

[(17)](J) Cuttings means geologic material displaced from the [drill hole] borehole during drilling.

(4) Terms beginning with the letter D.

(A) Demolition landfill has the same meaning as defined in section 260.200, RSMo.

(B) Department means the Missouri Department of Natural Resources, which includes the director thereof, or the person or division or program within the department delegated the authority to render the decision, order, determination, finding, or other action that is subject to review by the Administrative Hearing Commission.

[(18)](C) Director means the director of the [Division of Geology and Land Survey] Missouri Department of Natural Resources, or an authorized representative[s], who [shall] carry/y/ies out the administrative functions of these rules on behalf of the [division] department.

(D) Direct-push well means a monitoring well that is installed by pushing or hammering drive rods as opposed to drilling or augering. Direct-push wells tend to be smaller in diameter than their conventionally drilled counterparts leading to differences in annular space, casing, and sealing dimensions. Various screening

or data collection devices, such as a cone penetrometer or lysimeter can be used in a direct-push well.

(E) Disinfection means the use of a chemical to sterilize wells, pumps, storage tanks, or piping systems.

(F) Domestic well means a private water supply well equipped with a pump that does not have the capacity to produce seventy (70) gallons or more of water per minute at the surface and that has three (3) or less service connections. A domestic well is not limited to residential usage.

[(19)] Division, as defined in section 256.603, RSMo, means the Division of Geology and Land Survey.

(20) Driller's log, as defined in section 256.603, RSMo, means a record accurately kept at the time of drilling showing the depth, thickness, character of the different strata penetrated, location of water-bearing strata, depth, size and character of casing installed, together with any other data or information required on the certification report forms.]

[(21)](G) Drive shoe means the fittings placed at the bottom of the permanent metal casing which enables the driller to more efficiently drive the casing through the borehole and into solid rock.

(H) Dry hole means a well that was drilled and does not produce sufficient quantities of water for the intended use of the well.

[(22)] Established ground surface means the actual finished grade of the surface of the ground at the site of the well.

(23) Examination, as defined in section 256.603, RSMo, means an assessment of professional competency administered to applicants.]

(5) Terms beginning with the letter E.

(A) Extraction well means a monitoring well from which fluid or other media is extracted to clean, treat, or prevent contamination of groundwater as part of the remediation of a site. These include, but are not limited to, the following: wells serving pump and treat systems, including multi-well systems; wells to capture a contaminant plume or alter the direction or magnitude of groundwater movement; and other associated wells. Passive and active methane wells that terminate within landfill trash are exempted from these rules but are regulated by the Missouri Solid Waste Management Program. Passive and active methane and leachate extraction wells that are located outside of trash or extend through trash into the underlying bedrock formations are regulated under these rules.

(6) Terms beginning with the letter (F). (Reserved)

(7) Terms beginning with the letter (G).

(A) Gas-migration well means a monitoring well that is designed for the sampling, detection, and analysis of a gas or a vapor that is potentially present or migrating away from a contaminant source.

[(24)](B) Geologic[al] material means all earthen materials penetrated in drilling a well, such as alluvium, bedrock, glacial drift, residuum, and soil.

[(A)] Alluvium is a general term for clay, silt, sand, gravel or similar unconsolidated material deposited during comparative recent geologic time by a stream or body of running water as a sorted or semisorted sedimentary deposit.

(B) Dolomite means rock which contains at least fifty percent (50%) or more magnesium carbonates and has a weak reaction with a ten percent (10%) hydrochloric acid (HCl) solution.

(C) Glacial drift (unconsolidated) means a general term applied to all rock material (clay, sand, gravel and boulders)

transported by a glacier and deposited directly by or from the ice or by running water emanating from the glacier.

(D) Glacial outwash means a stratified sand and gravel removed or washed out from a glacier by meltwater streams and deposited in front of or beyond the terminal moraine or the margin of an active glacier.

(E) Limestone means rock which contains fifty percent (50%) or more calcium carbonate and has strong reaction with a ten percent (10%) hydrochloric acid (HCl) solution.

(F) Residuum means a product formed from the in-place disintegration and decomposition of bedrock.

(G) Sandstone means cemented or otherwise compacted sediment composed predominately of sand.

(H) Shale means a laminated rock consisting predominantly of clay-sized particles.]

(C) Geotechnical well or boring means a monitoring well used to collect or evaluate subsurface data to determine the properties of geologic materials such as type, chemical composition, compressibility, strength, or structure. This does not include geotechnical borings for construction foundation data.

(D) Glacial drift (unconsolidated) means all rock material (clay, silt, sand, gravel, and boulders) transported by a glacier and deposited directly by the ice or running water emanating from the glacier.

(E) Gravity grouting method means the process of pouring grout into the annular space or borehole without the use of a tremie pipe.

(F) Ground surface means the actual finished surface grade surrounding the well casing. This includes the natural ground surface, artificial fill, or hard surface such as concrete.

(G) Groundwater means any water beneath the surface of the ground.

[(25)](H) Grout means cement [slurry, sixteen (16) lbs/gal density—one (1) bag Type I cement to six (6) gallons water mix, Type II—V cement mix to manufacturers' specification, high solids twenty percent (20%) or more solids, bentonite slurry, sodium bentonite chips or pellets or any other commercially available grout approved by the division], bentonite, or other approved material used to seal the annular space or plug a well.

(8) Terms beginning with the letter H.

[(26)](A) [Heat exchange or h/Heat pump or geothermal well means any well constructed to [utilize] use the heat exchange properties of either groundwater or [of] geologic material penetrated in the well. Closed-loop horizontal heat pump systems installed in trenches or pits ten feet (10') or less in depth are exempt from these rules. Heat pump or geothermal systems that use surface water are exempt from these rules.

(B) High yield bedrock well means a water supply well drilled into bedrock aquifers that is equipped with a pump that has the capacity to produce seventy (70) or more gallons of water per minute to the surface and does not supply water to a public water system. These wells are also subject to major water user reporting requirements pursuant to sections 256.400–256.433, RSMo.

(C) High yield unconsolidated material well means a water supply well drilled into alluvial or glacial drift aquifers and is equipped with a pump that has the capacity to produce seventy (70) or more gallons of water per minute and does not supply water to a public water system. These wells are also subject to major water user reporting requirements pursuant to sections 256.400 – 256.433, RSMo.

[(27)] Heat pump installation contractor, as defined in section 256.603, RSMo, means any person, including owner, operator or drilling supervisor who engages for compensation in the drilling, boring, coring or construction of any well in the state for extracting thermal energy.

(28) Lakes are defined as the major reservoirs in Missouri. They are considered a sensitive area under these rules. They include: Clearwater Lake, Lake of the Ozarks, Stockton Lake, Pomme de Terre Lake, Bull Shoals Lake, Norfolk Lake, Table Rock Lake, Lake Wappapello and Truman Reservoir (see map following 10 CSR 23-6).]

(9) Terms beginning with the letter I.

(A) Inactive well means a well not currently operational that is not in a state of disrepair and does not present a threat to groundwater.

(B) Incomplete well means a well that was abandoned during construction with or without casing and is susceptible to surface contamination.

(C) Injection well means a monitoring well into which fluid or other media is injected to clean, treat, or prevent contamination of groundwater.

(10) Terms beginning with the letter J. (Reserved)

(11) Terms beginning with the letter K. (Reserved)

(12) Terms beginning with the letter L.

[(29)](A) Liner means plastic or steel pipe which is smaller in diameter than the casing [and used to solve problems encountered in deeper geologic formations or to reconstruct a well].

(13) Terms beginning with the letter M.

[(30)](A) Major reconstruction means the alteration or repair of any well that changes the original specifications [or casing depths or total] such as depth of the well[; for example:], liner[s, packers or deepening of well or extension of casing] installation, and/or replacing or extending the well casing above [finished grade] ground surface.

(B) Major water user has the same meaning as defined in section 256.400, RSMo.

(C) Maximum contaminant level means the maximum permissible concentration of a contaminant in drinking water pursuant to 10 CSR 60-2.

(D) Monitoring well means a well that is ten feet (10') or greater in depth and is constructed during assessment, characterization, and/or remediation of a site to obtain site-specific water quality, contaminant movement, or geologic or hydrologic data such as direct-push wells, extraction wells, gas-migration wells, geotechnical wells or borings, injection wells, observation wells, piezometers, soil borings, and subsurface penetrations associated with field screening devices such as cone penetrometers and lysimeters.

(E) Multifamily well means a well that has no more than eight (8) connections, has a pumping capacity of less than seventy gallons per minute (<70 gpm), and serves fewer than twenty five (25) individuals on average. A multifamily well may be used to serve a charitable or benevolent organization pursuant to section 640.116, RSMo.

[(31) Monitoring well installation contractor, as defined in section 256.603, RSMo, means any person, including owner, operator or drilling supervisor who engages for compensation in the drilling, boring, coring or construction of any well in this state which is drilled for geologic data, water quality or hydrologic data.]

(14) Terms beginning with the letter N.

(A) Nested well means a cluster of two (2) or more single riser limited-interval monitoring wells installed at different depths in a single borehole with a grout seal separating each screened interval.

(B) Nominal diameter means the standard size for casing.

Depending on the wall thickness, the inside diameter of the casing may be less than or greater than the number indicated.

(C) Nontransient noncommunity water system means a public water system as defined in 10 CSR 60-2.

(15) Terms beginning with the letter O.

(A) Observation well means any monitoring well in which the screen intersects a water table, for the specific purpose of determining either the elevation of the water table or the physical, chemical, biological, or radiological properties of groundwater. However, observation wells constructed in the tank pit and used as a part of an underground storage tank leak detection system are excluded from this definition.

(B) Open-hole completion means a monitoring well cased through all overburden material and upper water producing zones, completed in bedrock, with no well screen or filter pack.

(C) Open-hole grouting method means the process in which grout is introduced into the borehole by gravity or pumping through a tremie pipe before the casing is installed. The casing is lowered into the grout column to provide an annular seal.

(D) Open-loop heat pump water supply well means a well drilled to supply water for the purpose of heat transfer.

(E) Open-loop heat pump water return well means a well drilled to receive water from an open-loop heat pump water supply well that has passed through the heat pump machine.

(F) Ozark Confining Unit means low permeability bedrock that includes the Northview Formation, the Chattanooga Shale, and the upper thirty feet (30') of the Cotter Dolomite that serves as a natural barrier to groundwater mixing between the upper and lower aquifer.

(16) Terms beginning with the letter P.

[(32)](A) Packer [in these rules] means a rubber or neoprene collar (boot) installed on the casing or liner to hold the grout material in the annular space [and to help affect a seal of the casing].

[(33) Permitted well driller, as defined in section 256.603, RSMo, means any person who holds a permit issued pursuant to the provisions of sections 256.600—256.640, RSMo.]

[(34)](B) Permittee means a person who is permitted as a well, heat pump, monitoring well, or pump installation contractor pursuant to the provision of the law and these rules.

(C) Piezometer means a monitoring well used to measure the pressure of a fluid or the degree of compressibility of a substance when subjected to pressure or used to collect water samples for laboratory analysis. It is most commonly a small diameter well used to measure the hydraulic head of groundwater in subsurface water-bearing zones. Piezometers used to monitor the structural integrity of dams are exempt from the requirements of this rule.

(D) Pilot hole means a narrow hole drilled into the subsurface to facilitate the insertion of a larger drill bit or other boring tool and primarily used to site a location for a public well.

[(35) Person, as defined in section 256.603, RSMo, means any individual, whether or not connected with a firm, partnership, association, corporation or any other group or combination acting as a unit.]

[(36)](E) Pitless adapter means a device for above or below ground discharge designed for attachment to one (1) or more openings through a well casing and constructed [so as] to prevent the entrance of contaminants into the well.

[(37)](F) Pitless unit means an assembly with a cap [which] that extends from the upper end of the well casing to above [grade] ground surface and is constructed [so as] to prevent the entrance of contaminants into the well.

[(38)](G) Plastic means a thermoplastic pipe or casing material

composed of either polyvinyl chloride (PVC) or acrylonitrile-butadiene-styrene (ABS).

[(39)](H) Point of entry means the point *[when]* where the main water supply line *[hooks up to the central plumbing in a building.]*—

1. Connects the well to the pressure system and includes the pressure switch inside the structure or building being served; or

2. Enters the structure or building being served if connection from the pressure switch is located outside the structure or building being served.

[(I)] Positive displacement grouting method means the process in which grout in slurry form is poured into the well casing, which is suspended above the bottom of the hole, followed by a drillable plug. The plug is pushed to the bottom of the casing, forcing the grout from the bottom of the casing into the annular space. The casing is then lowered into the bottom of the borehole.

[(40)](J) Potable water means water *[which]* that is safe for human consumption *[in that it is free from impurities in amounts sufficient to cause disease or harmful physiological effects]* pursuant to 10 CSR 60.

[(41)](K) Pressure *[grout refers to the process of applying grout material under pressure to the annular space of a well for the purpose of sealing it and thus preventing vertical movement of fluids through the annular space. Grout must be introduced from the bottom of the annular space.]* grouting method means the process in which grout is forced through the well casing followed by water so that the grout returns under pressure to the surface through the annular space. The grout is then allowed to cure following manufacturer's specifications before drilling resumes.

[(42)](L) Pressure tank or hydropneumatic tank means a closed water storage container constructed to operate under a designed pressure rating to modulate the water system pressure within a selected pressure range.

(M) Primary contractor means a person engaged for compensation in the business of the construction, alteration, major reconstruction, pump service, or plugging of any well or directs or supervises these activities. The primary contractor is equally responsible for the work performed by the installation contractor, including, but not limited to, the submittal of all forms and fees.

(N) Public water system has the same meaning as defined in section 640.102, RSMo.

(O) Public water supply well means a well that is constructed to supply water to a public water system.

(P) Public well pump means a pump that is installed in a public water supply well to provide water to a public water system.

(Q) Pump and pumping equipment means any equipment or materials used or intended for use in withdrawing or obtaining groundwater. This includes water distribution lines from the well and equipment from the well through the pressure system. This does not include buckets or bailers that are lowered into the well for the purpose of retrieving water in water wells. This also does not include sampling, development, maintenance, or testing equipment used or inserted into monitoring wells.

[(43)] Priming means the first filling of a pump with water and action of starting the flow in a pump.

[(44)] Pump installation contractor, as defined in section 256.603, RSMo, means any person, firm or corporation engaged in the business of installing or repairing pumps and pumping equipment.]

[(45)](R) Pump installation machine *[or service rig]* means any vehicle, hoist, or machine used to install or remove pumps or liners from wells.

[(46)] Pumps and pumping equipment means materials used

or intended for use in withdrawing or obtaining groundwater for any use, except as applies to sampling, development, maintenance or testing equipment used or inserted into monitoring wells including, without limitation, seals and other safeguards to protect the water from pollution and together with plumbing fittings, electric wiring and accessories, and controls provide sanitary water storage facilities. Installation of pumps and pumping equipment means the selection of and the procedure employed in the placement and preparation for operation of pumps and pumping equipment. This includes the construction involved in making entrance to the well and into the building served, water distribution lines from the well through the pressure tank and water treatment equipment, to the main point of entry and establishing proper seals and other safeguards to protect groundwater from pollution, including repairs to existing installations.

[(47)] Registration report, as defined in section 256.603, RSMo, means a form to be sent to the division upon completion of plugging of an abandoned well, raising casings, lining wells, deepening of wells, major repairs and alterations, and jetted wells.

[(48)] Scope. For the purposes of these rules promulgated pursuant to Missouri Water Well Drillers Act, section 256.600, RSMo, the terms defined in this part have the meanings given them, except where the context clearly indicates otherwise.]

(17) Terms beginning with the letter Q. *(Reserved)*

(18) Terms beginning with the letter R.

(A) Residuum means a product formed from the in-place disintegration and decomposition of bedrock.

(B) Reverse tremie grouting method means the process in which a tremie pipe is set to within twenty feet (20') of the bottom of the well bore; the lower ten feet to twenty feet (10' to 20') of tremie pipe is perforated; cement grout is poured from the surface, forcing water downward and into the tremie pipe; and the water discharges to the surface. This method primarily is used for well plugging.

(C) Riser pipe means the pipe extending from the well screen into the surface completion of a monitoring well.

(19) Terms beginning with the letter S.

(A) Sanitary landfill has the same meaning as defined in section 260.200, RSMo.

[(49)](B) Screen means a filtering device used to keep sediment from entering a well.

[(50)](C) Septic tank means a watertight tank of durable materials through which *[sewage]* wastewater flows *[very slowly and in which solids separate from liquid to be decomposed or broken down by bacterial action]*.

[(51)](D) Service connection means a supply line from the well for the purpose of conveying water to a point of use that is connected to one (1) single family dwelling *[or in a farming application it shall]* and includes *[all]* additional water hookups for *[the]* any outbuildings. If the outbuildings are dwellings for persons or additional businesses then they *[would be]* are considered additional service connections.

(E) Service vehicle means any rig, pump truck, or dedicated vehicle used to perform work that is regulated by 10 CSR 23.

[(52)] Sewage means the water carried waste products from residences, public buildings, including the excrementitious or other discharges from the bodies of human beings or animals.]

[(53)](F) Sewer line means a pipe or conduit carrying *[sewage or into which sewage may back up]* wastewater to an ultimate point for treatment or discharge.

(G) Shallow monitoring means obtaining groundwater samples from a monitoring well within five feet (5') of ground surface.

[(54)](H) Site means a *[plot of land]* designated area on which a well or wells are drilled or are going to be drilled *[that is not more than forty (40) acres and is owned by a person as defined in section 256.603, RSMo. If larger sites exist, contact the division for reporting requirements]*.

(I) Soil boring means a monitoring well used to sample or test the soil strata to determine soil properties such as type, chemical composition, compressibility, strength, structure, or concentration of contaminants.

(J) Solid waste disposal area has the same meaning as defined in section 260.200, RSMo.

(K) Special waste landfill has the same meaning as defined in Solid Waste Management Regulations 10 CSR 80-2.010.

(L) State of disrepair means a well that is unable to produce water to the ground surface or transport water to a point of use or poses a contamination risk to the groundwater. It does not mean a well that is waiting for pump installation or a well that has been approved by the department for temporary dormancy. See Inactive Well 10 CSR 23-1.010(9)(A).

[(55)](M) Static water level means the *[distance measured from the established ground surface to the water surface]* level of water measured from ground surface in a well *[neither being pumped, nor under the influence of pumping nor flowing under artesian pressure]* that is not being affected by withdrawal of water.

[(56)](N) Subsurface disposal field, *[seepage bed,]* drainfield, percolation system, or tile absorption field means a system composed of open jointed tile, plastic lines, or lines composed of other material buried in *[stones and]* shallow trenches or beds through which *[septic tank effluent]* sewage or wastewater is disposed. *[The septic tank effluent is applied to land by distribution beneath the surface through the open jointed lines.]*

[(57)](O) Suction line means a pipe or line connected to the inlet side of a pump or pumping equipment *[or any connection to a well casing that may conduct nonsystem water into the well because of negative pressures]*.

(P) Surface water means water that rests or flows on the surface of the ground.

(20) Terms beginning with the letter T.

(A) TCE Impact Area means an area that contains contaminant(s) of one (1) or more of the following: chlorinated volatile organic compounds (VOCs) including trichloroethylene (TCE), TCE degradation products, or other contaminants pursuant to 10 CSR 60-4.

(B) TCE Concern Area means an area adjacent to a TCE Impact Area.

(C) Temporary monitoring well means a monitoring well used for field screening purposes that is plugged within thirty (30) days of being installed.

(D) Test hole means a hole drilled for the exploration of minerals or for geologic data that is not associated with the remediation or associated environmental characterization of a site. This includes stratigraphic holes drilled to obtain geologic information for structural studies or seismic shot holes.

(E) Transient noncommunity water system means a public water system as defined in 10 CSR 60-2.

[(58)](F) Tremie pipe means a *[small diameter]* conductor pipe, hose, or tubing used in the down hole placement of *[well construction material]* grout.

(G) Tremie grouting method means the process in which a small diameter pipe is inserted in the annular space or borehole to the depth of the zone to be sealed and grout is emplaced

through the tremie pipe by gravity.

(H) Tremie pressure grouting method means the process in which a small diameter pipe is inserted in the annular space or borehole to the depth of the zone to be sealed and grout is emplaced by pumping with a grout pump from the bottom to the top of the zone to be sealed.

[(59) Upper termination of the well casing means a point twelve inches (12") or greater above the finished ground surface.]

(21) Terms beginning with the letter U.

(A) Unconsolidated material means sediment that is loosely arranged or unstratified, or whose particles are not cemented together, occurring either at the surface or at depth, and does not include residuum.

(B) Utility waste landfill has the same meaning as defined in section 260.200, RSMo.

(22) Terms beginning with the letter V.

[(60)](A) Variance means *[any]* a modification to *[the application]* any provision of *[these rules]*. A variance may be applied for through the procedure set out in 10 CSR 23-1.040 of these rules] 10 CSR 23 pursuant to 10 CSR 23-1.040.

(B) Vertical closed-loop heat pump well means the borehole perpendicular to the horizon deeper than ten feet (10') into which a closed-loop pipe is placed for the purpose of heat transfer.

[(61) Water varieties mean—

(A) Groundwater means the water in subsurface zone of saturation. The water that supplies springs and wells is groundwater; and

(B) Surface water means water that rests or flows on the surface of the ground.

(62) Well, as defined in section 256.603, RSMo, means an excavation that is drilled, cored, bored, washed, driven, dug, jetted, trenched or otherwise constructed when the intended use of the excavation is for the acquisition of groundwater supply, for monitoring, thermal exchange or for exploration for minerals or geologic or hydrologic data; but does not include a cistern, an excavation made for the purpose of obtaining or for prospecting for oil or natural gas, or for construction foundation data, dewatering of construction sites or dewatering of existing structures, observation wells used as a part of an underground storage tank leak detection system of a minimal depth, as determined by the board by rule, or for inserting media to repressure oil or natural gas-bearing formations.]

(23) Terms beginning with the letter W.

(A) Wastewater means water or other liquids that carry or contain pollutants or water contaminants from any source including sewage and gray water.

(B) Water Well Drillers Fund means Groundwater Protection Fund.

[(63)](C) Well certification means the *[well certification report form and certification fee have been submitted to the division, the form has been reviewed by the division to verify the well has been constructed in accordance with the rules, and the division has assigned a well certification number to the well. The well certification number will be sent to the well owner by the division]* assignment by the department of a certification number to the well after fulfillment of the requirements set forth in 10 CSR 23-2.020.

[(64)](D) Well drilling machine *[or service rig]* means any machine or device *[such as a cable tool, rotary, hollow rod*

auger, and the like] used for the construction or modification of a well[s or a hoist, machine or vehicle used in well service which involves the modification to the well casing, screen depth or diameter below the upper termination of the well casing] and includes, but is not limited to, drill rigs and direct push machines. This excludes trenching machines in heat pump applications.

[(65) Well installation contractor, as defined in section 256.603, RSMo, means any person, including owner, operator and drilling supervisor who engages for compensation in the drilling, boring, coring or construction of any well in this state. The term, however, shall not include any person who drills, bores, cores or constructs a water well on his/her own property for his/her own use or a person who assists in the construction of a water well under the direct supervision of a permitted well installation contractor and is not primarily responsible for drilling operations.]

[(66) Well owner, as defined in section 256.603, RSMo, means any person or corporation who is the party responsible for having a well drilled and whose name appears on the well registration or certification form.]

[(67)](E) Well registration means the [registration report form and registration fee have been submitted to the division, the form has been reviewed by the division which documents certain types of activities according to the requirements. If the documented activities meet the requirements then a registration number is assigned by the division and sent to the well owner] assignment by the department of a registration number to the well after fulfillment of the requirements set forth in 10 CSR 23-2.020.

[(68)](F) Well seal means a device or method used to protect a well casing or water system from the entrance of any external pollutant at the point of entrance into the casing.

[(69)](G) Well vent means an outlet at the upper terminal of a well casing to allow equalization of air pressure in the well and escape of toxic or flammable gasses when present.

(24) Terms beginning with the letter X. (Reserved)

(25) Terms beginning with the letter Y.

[(70)](A) Yield or production means the quantity of water per unit of time which may flow or be pumped from a well under specified conditions.

(26) Terms beginning with the letter Z. (Reserved)

AUTHORITY: sections 256.603 and 256.626, RSMo [1994] 2016. Original rule filed April 2, 1987, effective July 27, 1987. For intervening history, please consult the *Code of State Regulations*. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

Title 10—DEPARTMENT OF NATURAL RESOURCES Division 23—Division of Geology and Land Survey Chapter 1—Definitions and Organizational Structure

PROPOSED RESCISSION

10 CSR 23-1.030 Types of Wells. This rule described the types of wells covered by the law.

PURPOSE: This rule is being rescinded and substantive information is being incorporated into 10 CSR 23-1.010 Definitions.

AUTHORITY: sections 256.606 and 256.626, RSMo 1994. Original rule filed April 2, 1987, effective July 27, 1987. For intervening history, please consult the *Code of State Regulations*. Rescinded: Filed June 27, 2018.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed rescission will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rescission with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

Title 10—DEPARTMENT OF NATURAL RESOURCES Division 23—[Division of Geology and Land Survey] Well Installation Chapter 1—Definitions [and Organizational Structure], Variances, and Permitting Requirements

PROPOSED AMENDMENT

10 CSR 23-1.040 [Modification by the Division] Variances. The board is amending the division name, chapter title, rule title, rule purpose, sections (1), (2), and (3); adding new sections (4) and (5), and renumbering as needed.

PURPOSE: This amendment streamlines the process for applying for a modification of 10 CSR 23.

PURPOSE: This rule [explains how the division may make modifications to the application of the provisions of the rules] gives the timeframe and procedure for submitting a request for a variance to the department.

(1) When strict applicability of any provision of these rules presents practical difficulties or unusual hardships, the [division] department, in a specific instance, may modify the application of those provisions consistent with the general purpose of these rules and the law. The [division] department may then impose certain conditions as are necessary[, in the opinion of the division,] to protect the groundwater of the state and health, safety, and general well-being of persons using or potential users of the groundwater supply.

(2) [Any r/Requests for [modification] variances shall—

(A) [b/Be submitted [in advance to the division in writing on a variance form obtained from the division and shall be

signed by the permittee. This request shall specify in detail on a form provided by the department at least forty-eight (48) hours prior to any regulated work being performed, except as provided in 10 CSR 23-1.040(4).

(B) State the nature [of] and reason the variance is [modification] being sought. [, the reasons and the special precautions to be taken to avoid contamination of the well. The request shall also]

(C) [i]Include at a minimum the proposed well depth, desired yield, casing type and depth, method of construction and grouting, geologic[a/] conditions likely to be encountered [and], a GPS location of the well, and possible sources of contamination. [Whether or not the requests are granted,]

(3) [t/The [division shall] department will state [in detail] the reason[s] for the [decision. If the requested modification is approved, the division will send or fax] approval or denial and will notify the requestor [a copy of the approved variance form. The approved variance form must be received by the permittee before construction or modification of the well begins] of approval or denial of the variance. Construction or modification of the well may not begin without department approval of the variance.

(4) Verbal approval for a variance may be granted on a case-by-case basis for which advanced notice could not be provided. The department will notify the requestor of approval or denial of the variance request.

(5) [The approved variance form must be attached to] Approved variance requests will be provided with a number by the department that shall be included on the well certification or registration report form when it is submitted to the [division] department.

[(3) A modification request may be initiated by telephone if there are extenuating circumstances associated with a particular well. This request shall be followed by the proper notification procedures as stated previously.]

AUTHORITY: sections 256.606 and 256.626, RSMo [1994] 2016. Original rule filed April 2, 1987, effective July 27, 1987. Amended: Filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed Nov. 1, 1995, effective June 30, 1996. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—[Division of Geology and Land Survey]
Well Installation
Chapter 1—Definitions [and Organizational Structure],
Variances, and Permitting Requirements

PROPOSED AMENDMENT

10 CSR 23-1.050 [Qualifications] Permittee Qualifications, Testing Procedures, and Permit Application. This board is amending the division name, chapter title, rule title, rule purpose, sections (1)–(7), removing sections (8)–(17), and renumbering as needed.

PURPOSE: This amendment incorporates substantive requirements from 10 CSR 23-1.060 Application for a Permit and 10 CSR 23-1.080 Denial of Application and renames the rule to more accurately reflect what is the regulation.

PURPOSE: This rule establishes [the] criteria and application procedures [used in] for permitting [a] water well [installation], heat pump [installation], monitoring well [installation], and pump installation[, employee and drilling supervisor in Missouri] permittees.

[(1) All applicants for a nonrestricted water well installation, heat pump installation, monitoring well installation, monitoring test-hole installation, and pump installation contractor permits shall meet the following requirements:

(A) Applicant must submit the testing application, supplied by the division, and appropriate testing fee;

(B) Applicant must pass the general test (open book) with a minimum score of seventy percent (70%);

(C) After passing the general test, applicant must submit an apprenticeship application, supplied by the division. The apprenticeship application must be accompanied by the appropriate permit fee and must be signed by the nonrestricted permittee who will be responsible for the apprenticeship and apprentice's work. Permittees who have had major enforcement actions taken against them (includes but is not limited to, settlement agreements, orders, consent judgments, suspension, or revocation) may not serve as an apprentice's responsible party for a period of one (1) year from the date of the division or court's signature on the final enforcement documents;

(D) After approval of the application for apprenticeship, the division will issue the applicant a permit number for use during the apprenticeship;

(E) Applicant must be an apprentice for a period of two (2) years;

(F) During the two- (2-) year apprenticeship, the apprentice must perform the type of work for the permit type being applied for and sign and submit the appropriate certification or registration form on at least—

1. Twenty-five (25) different water well installations; however, if apprentice performs installations and submits the appropriate certification form on ten (10) community wells, he/she may submit proof of financial responsibility for the remainder of the apprenticeship and perform work as stated in 10 CSR 23-1.050(15);

2. Twenty-five (25) different pump installations; however, if apprentice performs installations and submits the appropriate certification form on ten (10) community wells, he/she may submit proof of financial responsibility for the remainder of the apprenticeship and perform work as stated in 10 CSR 23-1.050(15);

3. Ten (10) different heat pump system installations;

4. Twenty (20) different monitoring well or twenty (20) different temporary monitoring well sites; and/or

5. The plugging of abandoned wells may be counted for up to ten percent (10%) of all the required number of installations;

(G) If apprentice cancels the apprenticeship, he/she may reapply, within one (1) year of termination. If the application is approved, apprentice will be reinstated at the same status as at the point of termination;

(H) Applications submitted from work performed by an

apprentice in other states will be considered as long as the corresponding state has construction requirements similar to the requirements of the state of Missouri, as determined by the division;

(I) The nonrestricted permittee responsible for the apprentice must also sign the required certification/registration form as the installation contractor and submit the form and appropriate fee to the division;

(J) At the end of the two- (2-) year apprenticeship, the apprentice must submit a testing application and the appropriate testing fee for the specific (closed book) test;

(K) If, at the end of the two- (2-) year period, the apprentice has not completed the required number of installations, the apprentice may apply to extend the apprenticeship on a year-by-year basis. If apprentice does not re-apply, within thirty (30) days of their renewal date, the apprenticeship will be cancelled; and

(L) After completion of the apprenticeship period and passing the specific test, the apprentice must submit a contractor application, supplied by the division, with appropriate fees. After approval of the application, the division will issue the apprentice a nonrestricted permit.

(2) The apprentice may transfer to another company; however, a nonrestricted permittee must sign as the responsible party for the apprentice. The apprentice may apply to transfer to another company by submitting a new apprenticeship application to the division. If an apprentice requests to be permitted under more than one (1) company, the apprentice must submit the appropriate application and fee for each company. Apprentice will be issued separate permit numbers for each company under which he/she serves as an apprentice. A nonrestricted permittee, from each company, must sign the application as the responsible party for each company.

(3) Applicants for a nonrestricted permit, who were previously permitted with the state, as evidenced by a department-issued permit number, which was in good standing, as determined by the department, are exempt from the requirements of 10 CSR 23-1.050(1)(C) through 10 CSR 23-1.050(1)(L) and provision 10 CSR 23-1.050(3)(C) below. These applicants may only apply for the same type of permit as held previously without being subject to the requirements of 10 CSR 23-1.050(1)(C) through 10 CSR 23-1.050(1)(L) or 10 CSR 23-1.050(3)(C). Applicant must also have submitted the required certification and/or registration forms for the required number of installations, listed in 10 CSR 23-1.050(1)(F), to be exempt. If appropriate number of certification and/or registration forms have not been submitted, applicant must submit proof of financial responsibility as stated in 10 CSR 23-1.050(3)(C). Applicants who were previously permitted but are applying for a different type of permit must adhere to 10 CSR 23-1.050(3)(A) through 10 CSR 23-1.050(3)(C). Applicants for a nonrestricted permit who currently hold a different type of contractor permit with the state of Missouri, as evidenced by a department-issued permit number, which is in good standing, as determined by the division, and wish to be exempt from the requirements of 10 CSR 23-1.050(1)(C) through 10 CSR 23-1.050(1)(L), must submit the testing application, appropriate testing fee, and proof of the valid permit to be scheduled for the test. After passing the general (open book) and specific (closed book) tests with a minimum score of seventy percent (70%) on each test, the applicant must adhere to 10 CSR 23-1.050(3)(A) through 10 CSR 23-1.050(3)(C) and submit required information to the division within thirty (30) days—

(A) A contractor application;

(B) Vehicle application, supplied by the division, for each drilling rig, pump truck, or service rig which will be used by the permittee and appropriate fee, unless the vehicle is already permitted under another company contractor;

(C) Proof of financial responsibility in the form of a surety bond, certificate of deposit (CD), or irrevocable letter of credit in the amount of twenty-five thousand dollars (\$25,000). The bond, CD, or letter of credit shall be subject to the following:

1. It must be placed on file with the division;

2. It must be made payable to the Department of Natural Resources;

3. It must be issued by an institution authorized to issue such bonds in this state;

4. A certificate of deposit (CD) must be automatically renewable for time frame covering the apprenticeship;

5. Any interest on the certificates of deposit shall be made payable to the permittee;

6. If the bond, CD, or letter of credit is cancelled by the issuing agent, permittee must submit new proof of financial responsibility within thirty (30) days of cancellation, or permit will be cancelled;

7. The requirement for proof of financial responsibility shall cease after two (2) consecutive years of permitted activity if the contractor does not have any outstanding notices of violation against their permit. If the contractor does not have any outstanding violations at the end of the two- (2-) year period, the bond, CD, or letter of credit will be returned to the contractor within thirty (30) days of the end of the two- (2-) year period;

8. If the division has found that the contractor has failed to meet the construction standards set forth in the Missouri Well Construction Rules, the division shall notify the contractor, within sixty (60) days, that the bond, CD, or letter of credit will be forfeited and the moneys placed in the Groundwater Protection Fund for remedial action, if the permittee does not bring the well or wells up to the standards established in the notice of violation(s) within thirty (30) days. The division may then expend whatever portion of the bond, CD, or letter of credit is necessary to hire another contractor to bring the wells or boreholes up to the standards set forth in the notice of violation(s) or to plug the well(s) and construct a new well(s);

9. Monies forfeited from the proof of financial responsibility and deposited in the Groundwater Protection Fund may be used by the department to remediate the contractor's violations;

10. If the division has found that the contractor has outstanding violations against the administrative standards set forth in the Missouri Well Construction Rules, the division shall notify the contractor, within sixty (60) days, that the bond, CD, or letter of credit will continue to be held as a condition of permit renewal for a period of another two (2) years if the contractor does not resolve outstanding violations within thirty (30) days. The contractor must renew the bond, CD, or letter of credit for another two (2) years within thirty (30) days of notification or permit will be subject to enforcement action which may include suspension or revocation; and

11. Applicant must also pre-notify any work performed which is regulated by the Missouri Well Construction Rules. Applicant must notify the division of work to be performed at least twenty-four (24) hours prior to start of regulated work. Notification must include owner name, address, GPS location, type of work to be performed, and date work will begin. The pre-notification requirement will be effective for the first full year from the permit issue date.

(4) A special restricted permit and examination are available, upon request, for those persons who only drill unconsolidated material wells or set pumps in them. To be scheduled for this type of restricted examination, an application must be received at least fifteen (15) days prior to the testing date for which the applicant wishes to be scheduled. If a restricted permittee is found to be drilling or setting a pump in a type of material they are not permitted to operate in, they will be subject to appropriate enforcement action.

(5) Information on where to obtain applicable study material will be available to each applicant prior to testing.

(6) A testing schedule will be available upon request of the applicant.

(7) A completed application for testing must be received fifteen (15) days prior to the testing date for which the applicant wishes to be scheduled. The division will notify the applicant within ten (10) days from receiving the completed application for testing if the applicant has qualified to take the test applied for and the date of the next available test. The testing fee is due before the test is given. A separate application and fee must be paid for each attempt to pass a test.

(8) A minimum score of seventy percent (70%) on the general test and a minimum score of seventy percent (70%) on each required specific test must be achieved by the applicant prior to being permitted. The applicant will be sent the results of the test as soon as possible. If applicant has a passing score, the appropriate applications for permit will be included with the results.

(9) If the applicant fails to pass a test on the initial test date, he/she may retake one (1) time, otherwise the following time frames for retesting shall apply:

(A) Third test date shall be no sooner than thirty (30) days after the initial test date;

(B) Fourth test date shall be no sooner than sixty (60) days after the second test date; and

(C) Fifth and all subsequent test dates shall be no sooner than one hundred eighty (180) days from the previous test date.

(D) All retakes must be accompanied by the testing fee at the time of the retake.

(10) If a request is made and documented more than thirty (30) days in advance, the exam may be taken orally. The same exam will be given and the same results must be achieved on an oral exam as for a written exam. Due to the special nature of this type of exam, special scheduling dates will be necessary. People with disabilities requiring services or accommodations can make arrangements by contacting the division.

(11) Any applicant who does not agree with his/her test results may appeal to the Well Installation Board.

(12) If an applicant wishes to withdraw his/her application for testing, s/he may do so by requesting, in writing, ten (10) days in advance. If the applicant does not cancel as stated and is not present for the test, they may reschedule up to two (2) times. If after the second reschedule the applicant does not appear, the testing application will be cancelled and the fee will be forfeited. If the applicant wishes to take the test after the testing application has been cancelled, they must reapply and submit the appropriate fee.

(13) Persons who contract the drilling of wells, installation of pumps, or both, but do not drill the wells or set the pumps must be a permitted well installation, heat pump installation, monitoring well installation, monitoring test-hole installation, or pump installation contractor, or any combination of these. The only test required is the general (open book) test. A restriction must be placed on the permit which states that any well drilling or pump work contracted be done by a non-restricted permitted installation contractor. Persons who wish to apply for this type of exam shall submit the testing application and appropriate fees.

(14) A nonrestricted permitted well installation, heat pump installation, monitoring well installation, monitoring test-hole installation, pump installation contractor, or any combination of these, from the company responsible for the apprentice, must be present at all times during the apprentice's required number of installations (see subsection (1)(F) of this rule). The nonrestricted permittee must be on site during the initial installations (see subsection (1)(F) of this rule) while a well is being drilled and completed, a pump is being set, or any combination of these. The nonrestricted permittee on site must hold the same type of permit as the type of work being performed by the apprentice.

(15) A nonrestricted permittee must be on site at all times until the required number of installations, in 10 CSR 23-1.050(1)(F), is met by the apprentice.

(16) Persons who wish only to drill the heat pump hole and grout the closed-loop into the heat pump hole must obtain a permit to do so. The permit will be restricted to the previously mentioned activities and a current nonrestricted water well installation contractor's permit is required as one (1) of the qualification criteria. Those people who wish to apply for this type of heat pump installation contractor's permit that have a valid nonrestricted water well installation contractor permit must take only the general test covering heat pump construction.

(17) Applicants for contractor permits who do not meet the requirements set out in this rule may petition the board. The board has the authority to rule upon the qualifications of the applicants and may require additional evidence of qualifications.]

(1) Restricted Permit.

(A) To apply for a restricted permit as a water well, heat pump, monitoring well, or pump installation contractor—

1. Submit a complete permit testing application and corresponding fee;

2. Pass the applicable restricted permit test(s) (open book) with a minimum score of seventy percent (70%); and

3. Submit a complete permit application and the corresponding fee.

(B) After approval of the permit application, the department will issue the restricted permit. A permit may be denied if the applicant has unresolved violations.

(2) Non-Restricted Permit. See 10 CSR 23-1.050(7) for adding a permit type to an existing permit and 10 CSR 23-1.105 for reinstatement of an expired permit.

(A) To apply for a non-restricted permit as a water well, heat pump, monitoring well, or pump installation contractor—

1. Complete the apprenticeship program pursuant to 10 CSR 23-1.050(3);

2. Submit a complete permit testing application and corresponding fee;

3. Pass the applicable non-restricted permit test(s) (closed book) with a minimum score of seventy percent (70%);

4. Submit a complete permit application and the corresponding fee; and

5. If applicable pursuant to 10 CSR 23-1.050(3)(L) or 10 CSR 23-1.050(7) the apprenticeship program may be waived.

(B) After approval of the permit application, the department will issue the non-restricted permit. A permit application may be denied if the applicant has unresolved violations. After resolution of violations, the department may require prenotification pursuant to 10 CSR 23-1.050(6).

(3) Apprenticeship Program.

(A) To apply for a permit as an apprentice water well, heat pump, monitoring well, or pump installation contractor—

1. Submit a complete testing application and corresponding fee;

2. Pass the applicable apprentice permit test(s) (open book) with a minimum score of seventy percent (70%);

3. Submit a complete apprentice permit application, signed by a responsible party who will be responsible for the apprenticeship;

4. The responsible party shall be a non-restricted permit holder holding the same type of permit for which the apprentice is applying. A non-restricted permittee may not serve as an apprentice's responsible party for a period of one (1) year from the date of resolution of any enforcement action taken by the department (includes, but is not limited to, settlement agreements, orders, consent judgments, suspension, or revocation); and

5. After approval of the permit application, the department will issue the apprentice permit.

(B) The apprenticeship period is two (2) years.

(C) Complete work for the applicable permit type and sign the appropriate certification or registration form on a minimum of—

1. Water Well Permit - Twenty-five (25) different domestic or multifamily water well installations or ten (10) different high yield bedrock or public wells;

2. Pump Installation Permit - Twenty-five (25) different domestic or multifamily pump installations or ten (10) different high yield or public well pump installations;

3. Heat Pump Installation Permit - Ten (10) different heat pump system installations;

4. Monitoring Well Permit - Twenty (20) different monitoring wells or twenty (20) different temporary monitoring well sites.

A. Test Hole Only Endorsement - Twenty (20) different test holes; and

5. Plugging abandoned wells for the applicable type of permit may count for up to ten percent (10%) of the required installations.

(D) The responsible party for the apprentice or another non-restricted permit holder for the applicable permit type shall oversee the apprentice's work on site, sign the certification or registration form as the installation contractor, and submit the form and appropriate fee.

(E) Once the number of installations pursuant to 10 CSR 23-1.050(3)(C) have been completed, the apprentice may work independently for the remainder of the two (2) year apprenticeship provided the responsible party continues to sign certification and registration forms as installation contractor along with the apprentice.

(F) The apprenticeship period may be reduced if the required number of installations pursuant to 10 CSR 23-1.050(3)(C) are met and proof of financial responsibility are provided for the remainder of the apprenticeship period pursuant to 10 CSR 23-1.050(5).

(G) An apprentice may transfer the apprenticeship to another

company by submitting a new apprenticeship application to the department with a non-restricted permittee signing as the responsible party.

(H) An apprentice can be permitted under more than one (1) company if the apprentice submits the appropriate application and fee for each permit type and a non-restricted permittee from each company signs as the responsible party. Apprentices will be issued separate permit numbers for each permit type.

(I) At the end of the two (2) year period, the apprentice may apply to extend the apprenticeship on a year-by-year basis if the number of installations has not been met. If an application to extend the apprenticeship is not received, the apprentice permit will not be renewed.

(J) If an apprentice cancels the apprenticeship, they may reapply within five (5) years. If the application is approved, the apprentice will be reinstated at the same status as at the point of cancellation.

(K) Proof of work performed in other states by an apprentice will be evaluated on a case-by-case basis for meeting the requirements of 10 CSR 23-1.050(3)(C).

(L) Applicants who are permitted in another state may request an exemption to the apprenticeship program provided they—

1. Submit proof of a valid permit and supporting documentation that includes, at a minimum, a copy of current license or permit, examples of well records, and contact information for the regulatory agency that issued the permit (same type of permit(s) only); and

2. Submit proof of financial responsibility pursuant to 10 CSR 23-1.050(5) for a period of two (2) years; and

3. Complete one (1) year of prenotification pursuant to 10 CSR 23-1.050(6).

(4) Testing.

(A) Applicants may retake the test one (1) time on the initial test date. All subsequent test attempts shall be a minimum of thirty (30) days from the initial test date.

(B) An applicant may withdraw a testing application by notifying the department a minimum of ten (10) days in advance. Testing application fees are non-refundable; however, tests may be rescheduled up to two (2) times without cancellation of the application and forfeiture the corresponding fee.

(5) Financial Responsibility.

(A) Proof of financial responsibility pursuant to section 256.616, RSMo, when applicable, may be in the form of a surety bond, certificate of deposit (CD), or irrevocable letter of credit. The bond, CD, or letter of credit shall—

1. Be submitted to the department in the amount of twenty-five thousand dollars (\$25,000);

2. Be made payable to Missouri Department of Natural Resources;

3. Be issued by an institution authorized to issue such bonds in this state;

4. Be irrevocable letter of credit or automatically renewable (CD) for time frame covering the apprenticeship;

5. Have any interest on CDs made payable to the permittee; and

6. Be held for a period of two (2) years from the permit issue date.

(B) If the bond, CD, or letter of credit is cancelled by the issuing agent, the permittee shall submit new proof of financial responsibility within thirty (30) days of cancellation, or the permit will be suspended until proof of financial responsibility is restored.

(C) If the department finds that the contractor has outstanding administrative violations set forth in the Missouri Well Construction Rules, the department will notify the permittee that the bond, CD, or letter of credit will continue to be held as a condition of permit renewal for an additional two (2) years if

the permittee does not resolve outstanding violations. Within thirty (30) days of notification of an outstanding administrative violation by the department the permittee is responsible for ensuring that the bond, CD, or letter of credit is valid for another two (2) years or the permit will be subject to enforcement action, which may include suspension or revocation.

(6) **Prenotification.** Notice shall be given twenty four (24) hours in advance for any regulated work requiring prenotification. Prenotification shall include work to be performed, owner name, address, GPS location, and date work will begin. The prenotification requirement will be effective for one (1) year from the permit issue date unless otherwise directed by the department.

(7) **Adding permit types.**

(A) Current Missouri permit holders, with the exception of pump installation permit holders, may apply to add additional permit types by doing the following:

1. Complete apprenticeship program pursuant to 10 CSR 23-1.050(3) or submit proof of financial responsibility pursuant to 10 CSR 23-1.050(5) and complete one (1) year of prenotification pursuant to 10 CSR 23-1.050(6);

2. Submit a complete permit testing application and corresponding fee;

3. Pass the applicable restricted (open book) and nonrestricted (closed book) permit test(s) with minimum scores of seventy percent (70%); and

4. Submit a complete permit application and the corresponding fee.

(B) Any well installation permit holder may add a pump installation permit without completion of 10 CSR 23-1.050(5)(A).

(C) Pump installation permit holders shall complete the apprentice program to add additional permit types.

AUTHORITY: sections 256.606, 256.607, 256.611, 256.613, and 256.626, RSMo [2000] 2016. Original rule filed April 2, 1987, effective July 27, 1987. For intervening history, please consult the Code of State Regulations. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—Division of Geology and Land Survey
Chapter 1—Definitions and Organizational Structure**

PROPOSED RESCISSION

10 CSR 23-1.060 Application for a Permit. This rule outlined the division's requirements for filing an application for a permit.

PURPOSE: This rule is being rescinded and substantive information

is being incorporated into 10 CSR 23-1.050 Permittee Qualifications, Testing Procedures, and Permit Application.

AUTHORITY: sections 256.606, 256.607, 256.611, 256.613, and 256.626, RSMo 2000. Original rule filed April 2, 1987, effective July 27, 1987. For intervening history, please consult the Code of State Regulations. Rescinded: Filed June 27, 2018.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed rescission will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rescission with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—[Division of Geology and Land Survey]
Well Installation
Chapter 1—Definitions [and Organizational Structure],
Variances, and Permitting Requirements**

PROPOSED AMENDMENT

10 CSR 23-1.075 Disciplinary Action [and Appeal Procedures]. The board is amending the division name, chapter title, rule title, rule purpose, and sections (1)–(5).

PURPOSE: This amendment clarifies the disciplinary action process and removes language rendered obsolete by section 621.250, RSMo.

PURPOSE: This rule outlines the [procedures the division and board will take when a person is affected by disciplinary actions and contested case appeals of such] disciplinary action[s] process.

[(1) Definitions. As used in this rule, the following terms mean:

(A) Board—Well Installation Board (WIB);

(B) Department—The Department of Natural Resources, which includes the director thereof, or the person or division or program within the department delegated the authority to render the decision, order, determination, finding, or other action that is subject to review by the board;

(C) Division—The Department of Natural Resources' Division of Geology and Land Survey, which includes the director thereof, or the person within the division delegated the authority to render the decision, order, determination, finding, or other action that is subject to review by the board;

(D) Hearing—Any presentation to, or consideration by, the board or its hearing officer of evidence or argument on a petition seeking the board's review of an action by the department;

(E) Hearing officer—an attorney appointed by the board to conduct an administrative hearing on behalf of the board;

(F) Person—An individual, partnership, copartnership,

firm, company, public or private corporation, association, joint stock company, trust, estate, political subdivision, or any agency, board, department, or bureau of the state or federal government or any other legal entity whatever, which is recognized by law as the subject of rights and duties.

(2) The division shall cause investigations to be made as appropriate in response to requests from the board or upon receipt of other information concerning alleged violations of the Water Well Driller's Act in order to determine whether there has been any violation of the law or of these rules and, in doing so, may request the permittee, well owner, or other individuals to appear before them to determine the merits of the situation in question. If requested individuals do not appear before the division, a determination may be made based on the available information or the division may order a permitted well driller to appear before the division and/or produce relevant documentation. Any person who willfully obstructs, hinders, or prevents agents of the division in the performance of the duties imposed on them by sections 256.600–256.640, RSMo, is guilty of a class A misdemeanor and may be liable for civil and criminal penalties as set out in section 256.637, RSMo. If the division determines that the holder of any permit issued according to sections 256.600–256.640, RSMo, has violated any provision of this law or any rule adopted according to this law, the division shall reprimand, place a permit holder on probation, or suspend or revoke a permit, and may issue a notice of violation describing the remediation required and the time period allowed to remedy the violation and/or pursue any additional remedy authorized by the Water Well Driller's Act.

(3) As a condition of any order, the division may specify and schedule any remediation required so that division staff can be present, if deemed necessary, while the remediation is performed. The division shall issue and serve on the permittee, written notice of any order issued under sections 256.600–256.640, RSMo, as provided in section 256.630, RSMo.

(4) Filing an Appeal or Requesting a Hearing.

(A) Any person adversely affected or aggrieved by a decision of the division or otherwise entitled to ask the board for a hearing under the Water Well Driller's Act may appeal by filing a petition with the board or the division within thirty (30) days after receiving notice of the decision.

(B) A petition sent by registered mail or certified mail will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the board or the division. Such appeal shall stay the enforcement of the order until a final determination is made by the board.

(5) Procedures.

(A) The board may appoint a hearing officer, who shall provide a recommended decision to the board based on a hearing, stipulations or agreements by the parties, disposition in the nature of a default judgment, judgment on the pleadings, or summary determination, in accordance with the Water Well Driller's Act and Chapter 536, RSMo. The board or the hearing officer shall provide the parties at least thirty (30) days advance notice of any hearing.

1. At any such hearing, all testimony taken before the board or its hearing officer shall be under oath and recorded stenographically, and the transcript shall be available to any person for the cost of reproduction, pursuant to section 256.630.4, RSMo.

(B) Upon receipt of the hearing officer's recommendation

and the record in the case, the board shall—

1. Distribute the hearing officer's recommendation to the parties or their counsel;

2. Allow the parties or their counsel an opportunity to submit written arguments regarding the recommendation;

3. Allow the parties or their counsel an opportunity to present oral arguments before the board makes the final determination;

4. Complete its review of the record and deliberations as soon as practicable;

5. Deliberate and vote upon a final, written determination during an open meeting, except that the board may confer with its counsel in closed session with respect to legal questions;

6. Issue its final, written determination as soon as practicable, including findings of fact and conclusions of law, and so notify the parties. The decision of the board shall be based only on the facts and evidence in the record; and

7. The board may adopt the recommended decision of the hearing officer as its final decision. The board may change a finding of fact or conclusion of law made by the hearing officer, or may vacate or modify the recommended decision, only if the board states in writing the specific reason for a change.

(6) Such final orders and determinations of the board are subject to judicial review according to section 256.630.4, RSMo.]

(1) The department may cause an investigation to be made upon receipt of information concerning alleged violations of sections 256.600 to 256.640, RSMo, and implementing regulations or any standard, limitation, or order pursuant thereto and may cause to be made any other investigations consistent with the purposes of sections 256.600 to 256.640, RSMo.

(2) If an investigation discloses that a violation of sections 256.600 to 256.640, RSMo, or implementing regulations exists, the department may issue an order requiring the remediation or abatement of the specified condition(s). The order will specify the violations of sections 256.600 to 256.640, RSMo, or implementing regulations or any standard, limitation, or order pursuant thereto or any term or condition violated.

(3) As a condition of any disciplinary action or order, the department will specify corrective actions and require that those actions be scheduled so that department staff can be present while the specified corrections are performed.

(4) A suspended permittee may be reinstated after the department approves that the terms and conditions, upon which the suspension order was based, have been corrected. The reinstated permittee may be placed on a period of probation as determined by the department.

(5) A permittee who has had a permit revoked may reapply for a permit pursuant to 10 CSR 23-1.050 as a new applicant and provide performance bond or irrevocable letter of credit pursuant to section 256.616, RSMo. The department will determine whether the person should be issued a new permit. In no case will a new permit be issued sooner than one (1) year after the revocation has taken effect.

AUTHORITY: sections 256.606, 256.623, 256.626, [and] 256.630, and 621.250, RSMo [2000] 2016. Emergency rule filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Original rule filed Aug. 17, 1993, effective March 10, 1994. For intervening history, please consult the Code of State Regulations. Amended: Filed

June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—Division of Geology and Land Survey
Chapter 1—Definitions and Organizational Structure**

PROPOSED RESCISSION

10 CSR 23-1.080 Denial of Application. This rule described the reasons for denial of permit.

PURPOSE: This rule is being rescinded and substantive information is being incorporated into 10 CSR 23-1.050 Permittee Qualifications, Testing Procedures, and Permit Application.

AUTHORITY: sections 256.606, 256.611 and 256.626, RSMo Cum. Supp. 1991. Original rule filed April 2, 1987, effective July 27, 1987. Amended: Filed Aug. 17, 1993, effective March 10, 1994. Rescinded: Filed June 27, 2018.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed rescission will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rescission with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—[Division of Geology and Land Survey]
Well Installation
Chapter 1—Definitions [and Organizational Structure],
Variances, and Permitting Requirements**

PROPOSED AMENDMENT

10 CSR 23-1.090 Permits [Requirement]. The board is amending the division name, chapter title, rule title, purpose, sections (1) and (2), and adding section (3).

PURPOSE: This amendment more explicitly states the general permit requirements, clearly defines permit types, and renames the rule to more accurately reflect the regulation.

PURPOSE: This rule explains [that a permit is required in order] permit expectations to construct, [or] repair, or plug a well [in the state].

[(1) No person shall drill, construct, install pumps or pumping equipment, repair a well or plug a well within this state unless in possession of a valid permit to do so issued by the division. A well installation contractor's permit is valid for drilling and repair on wells that produce water for human consumption, animal, industrial or irrigation purposes, open-loop heat pump wells and water return wells. A monitoring well installation contractor's permit is valid for drilling and repair of monitoring wells and test holes. A monitoring-test hole installation contractor's permit which is a restriction on the monitoring well installation permit is valid for drilling or coring of wells in the exploration for minerals or geologic data. A heat pump installation contractor's permit is valid for drilling and repair of heat pump wells (excluding open-loop heat pump and water return wells), construction of trenched systems and installation of loops used in heat pump systems. A pump installation contractor's permit is valid for setting pumps and liners and removal of pumps for repair and/or replacement in wells that produce water for human consumption, animal or irrigation purposes. It is also valid for setting pumps in extraction type monitoring wells. All contractor's permits are valid for plugging wells, except monitoring wells must be plugged by monitoring well installation contractors. The previously mentioned permits can be issued on a restricted or nonrestricted basis. Restricted permits are issued to persons who only contract the work specific to the type of permit requested or to primary contractor on site drilling supervisors. All permits issued pursuant to these rules shall expire one (1) year after issuance.

(2) Nothing in sections 256.600–256.640, RSMo shall prevent a person who has not obtained a permit pursuant to sections 256.600–256.640, RSMo from constructing or plugging a well on his/her own or leased property intended for use only in a single family house which is his/her permanent residence or intended for use only for farming purposes on his/her farm and where the waters to be produced are not intended for use by the public or in any residence other than his/her own. Each person shall comply with all rules adopted under sections 256.600–256.640, RSMo. The landowner may hire an unpermitted person to plug a hand dug well but the landowner is responsible to make sure the well is plugged according to 10 CSR 23-3.110 and reported on a registration report form with the accompanying fee. All other types of wells must be plugged by a permitted contractor unless the landowner does the work as provided in this section.]

(1) General Permit Requirements.

(A) A non-restricted permit is required to drill, construct, repair, reconstruct, plug, or install pumps or pumping equipment in a well.

(B) All non-restricted permits are valid for plugging wells, except monitoring wells. Monitoring wells shall be plugged by a monitoring well installation permittee.

(C) Restricted permits are required for persons who contract or sub-contract work regulated by Missouri Well Construction Rules.

(D) Restricted permits are required for persons to be a primary contractor and/or on-site drilling supervisor.

(E) All permits issued pursuant to these rules will expire one

(1) year after issuance.

(F) Permit card(s) shall be carried by the permittee and machine and vehicle cards shall be placed in each registered vehicle.

(2) Permit Types.

(A) A water well permit is valid for drilling, repairing, reconstructing, and plugging wells that produce water for human consumption, animal, industrial or irrigation purposes, and open-loop supply and return heat pump wells.

(B) A monitoring well permit is valid for drilling, coring, reconstructing, and plugging monitoring wells.

(C) A test hole endorsement is valid for drilling, coring, or plugging of wells in the explorations for minerals or for geologic data.

(D) A heat pump permit is valid for drilling, plugging, and repairing of heat pump wells (excluding open-loop heat pump and water return wells) and construction of trenched systems and installation of loops used in heat pump systems.

(E) A pump permit is valid for installation and removal of pumps, liner installation, and for installation of pumps in extraction monitoring wells.

(3) Landowners may construct or plug a well on their own property pursuant to section 256.607(2), RSMo.

AUTHORITY: sections 256.606, 256.607, 256.613, 256.615, and 256.626, RSMo [1994] 2016. Original rule filed April 2, 1987, effective July 27, 1987. For intervening history, please consult the *Code of State Regulations*. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, 111 Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, 111 Fairgrounds Road, Rolla, MO 65401.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—[Division of Geology and Land Survey]
Well Installation**

**Chapter 1—Definitions [and Organizational Structure],
Variances, and Permitting Requirements**

PROPOSED AMENDMENT

10 CSR 23-1.105 Permit Renewal. The board is amending the division name, chapter title, and adding sections (1)–(5).

PURPOSE: This amendment consolidates the requirements for renewing a permit by incorporating substantive information from 10 CSR 23-1.130 Reinstatement.

[The permittee shall file for the renewal with the division and submit the appropriate fee prior to the expiration date of his/her permit. Any forms that are improperly completed will

be returned to the contractor for completion. A penalty fee also shall be paid if the renewal is submitted within thirty (30) days of the expiration date. If a permit has been expired more than thirty (30) days, permittee must reapply and take the appropriate exam to obtain a new permit. Upon receipt of any completed renewal request, renewal fee and appropriate forms completed in a manner acceptable to the division, a permittee shall be sent a renewal permit if still qualified for the permit. A permit will not be renewed if the permittee has any unresolved violations pending against his/her permit, unless a schedule to remedy the violations has been approved in advance by the division. The division may issue a renewal permit on a probationary basis. The renewal permit shall consist of a card and contain the name of the permittee, expiration date and permit number. The permit card shall be carried by the permittee and the rig cards must be placed in each rig.]

(1) The permittee shall submit the appropriate renewal fee prior to the expiration date of the permit.

(2) Any permit renewal submitted more than thirty (30) days after the expiration date will be assessed a late fee pursuant to 10 CSR 23-2.010(F).

(3) Reinstatement of an expired permit. An expired permit may be reinstated only for the permit type previously held.

(A) For reinstatement less than one (<1) year from expiration date.

1. Submit applicable permit application and fee.

(B) For reinstatement one or more (≥1) year from expiration date.

1. Submit a complete testing application and corresponding fee.

2. Pass the applicable restricted permit test(s) (open book) and/or non-restricted permit test(s) (closed book) with a minimum score of seventy percent (70%).

3. Submit a complete permit application and corresponding fee.

4. Provide proof of completion of the required installations for the applicable permit type pursuant to 10 CSR 23-1.050(3)(C); or submit proof of financial responsibility pursuant to 10 CSR 23-1.050(5) and complete one (1) year of prenotification pursuant to 10 CSR 23-1.050(6).

(4) The permittee shall resolve any outstanding violations prior to permit reinstatement or renewal unless a schedule to remedy the violations has been approved in advance by the department.

(5) Any permittee who changes companies or wishes to cancel their permit shall notify the department.

AUTHORITY: sections 256.606, 256.607, 256.611, and 256.626, RSMo [1994] 2016. Original rule filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed Nov. 1, 1995, effective June 30, 1996. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250,

III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—Division of Geology and Land Survey
Chapter 1—Definitions and Organizational Structure**

PROPOSED RESCISSION

10 CSR 23-1.130 Reinstatement. This rule described the steps that must be taken to have a permit reinstated.

PURPOSE: This rule is being rescinded and substantive information is being incorporated into 10 CSR 23-1.105 Permit Renewal.

AUTHORITY: sections 256.606, 256.616, 256.626 and 256.630, RSMo Cum. Supp. 1991. Original rule filed April 2, 1987, effective July 27, 1987. Emergency amendment filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Amended: Filed Aug. 17, 1993, effective March 10, 1994. Rescinded: Filed June 27, 2018.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed rescission will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rescission with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—[Division of Geology and Land Survey]
Well Installation
Chapter 1—Definitions [and Organizational Structure],
Variances, and Permitting Requirements**

PROPOSED AMENDMENT

10 CSR 23-1.140 [Placement of Permit Number] Vehicle and Machine Registration. The board is amending the division name, chapter title, rule title, rule purpose, section (1), and adding sections (2)–(4).

PURPOSE: This rule is being amended to include substantive information from 10 CSR 23-1.155 Well Drilling and Pump Installation Machine Registration and is being renamed to more accurately reflect the regulation.

PURPOSE: This rule describes [how to place the permit number on the machine] the registration process for drill rigs, direct push machine, pump installation trucks, and service vehicles.

[(1) A permittee shall place in a conspicuous location on

both sides on each well drilling machine or pump installation machine the words MO PERMIT and the permit number in figures not less than three inches high and one and one-half inches wide (3" × 1 1/2"). The number shall be in a contrasting color to the background. This change is not required until new equipment is purchased, operator changes equipment or the rig is painted. If new permit numbers are issued, they must be placed on the drilling or pump installation machine within six (6) months.]

(1) All well drilling and pump installation machines and service vehicles shall be registered with the department.

(2) To register vehicles and machines, a complete vehicle registration shall be submitted along with the appropriate fee pursuant to 10 CSR 23-2.010. A registration card will be issued for each vehicle and machine and shall be carried in each vehicle and machine at all times and be subject to inspection by the department. The card expires one (1) year from the date of issue.

(3) Notice of a change in ownership or the purchase of a vehicle and/or machine shall be provided to the department within thirty (30) days and submit a new application form and the appropriate fee. A new vehicle or machine card will be issued.

(4) A permittee shall place in a conspicuous location on both sides of each vehicle or machine the words MO PERMIT and the permit numbers not less than three inches (3") high and one and one-half inches (1 1/2") wide in a contrasting color to the background of the vehicle or machine. Permit number shall be placed on the vehicle or machine within sixty (60) days of receiving the vehicle or machine registration card.

AUTHORITY: sections 256.606, 256.617, and 256.626, RSMo [Cum. Supp. 1991] 2016. Original rule filed April 2, 1987, effective July 27, 1987. Amended: Filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—Division of Geology and Land Survey
Chapter 1—Definitions and Organizational Structure**

PROPOSED RESCISSION

10 CSR 23-1.155 Well Drilling and Pump Installation Machine Registration. This rule described the registration procedures for the drill and pump installation machines.

PURPOSE: This rule is being rescinded and substantive information

is being incorporated into 10 CSR 23-1.140 Vehicle and Machine Registration.

AUTHORITY: sections 256.606 and 256.626, RSMo Cum. Supp. 1991. Emergency rule filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Original rule filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed rescission will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rescission with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—[Division of Geology and Land Survey]
Well Installation
Chapter 1—Definitions [and Organizational Structure],
Variances, and Permitting Requirements

PROPOSED AMENDMENT

10 CSR 23-1.160 Mail and Notification Procedures. The board is amending the division name, chapter title, rule purpose, sections (1), (2), and (3), and removing section (4).

PURPOSE: This amendment adds electronic mail.

PURPOSE: This rule informs [the] permittees of [Division of Geology and Land Survey mailing and] notification procedures.

[(1) Mail. All persons permitted by the division shall keep the division advised of current address and must readily accept all mail sent to them by the division.

(2) Registered or certified mail sent with proper postage and last known address that is returned unclaimed shall be considered adequate notification of notice served.

(3) The division shall be notified of any change of address within thirty (30) days of change.

(4) Refusal to accept mail is a violation of these rules and may result in disciplinary action. Mail not accepted by the permittee that has proper postage and last known address shall be considered adequate notification.]

(1) Permittees shall notify the department of any change of business, residential, mailing, and electronic mailing addresses within thirty (30) days of change and accept all mail sent by the department.

(2) Regular and certified mail sent with proper postage to the last known address will be considered adequate notification of notice served.

(3) Refusal to accept mail is a violation of these rules and may result in disciplinary action.

AUTHORITY: section 256.600, RSMo [1994] 2016. Original rule filed April 18, 1990, effective June 28, 1990. Amended: Filed Nov. 1, 1995, effective June 30, 1996. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—[Division of Geology and Land Survey]
Well Installation
Chapter 2—[Well Drillers and Pump Installers
Permitting] Fee Structure, Certification, and Registration

PROPOSED AMENDMENT

10 CSR 23-2.010 Fee Structure. The board is amending the division name, chapter name, rule purpose, section (1), and removing sections (2)–(10).

PURPOSE: This amendment removes duplicative requirements and improves readability by removing unnecessary language.

PURPOSE: This rule establishes a fee structure [to be used in permitting well installation, heat pump installation, monitoring well installation, pump installation, employee and drilling supervisor contractor and in certification and/or registration of wells and for examinations relating to permit applications] for activities conducted under 10 CSR 23 pursuant to section 256.623, RSMo.

[(1) Each well installation, heat pump installation, monitoring well installation, monitoring-test hole installation, and pump installation contractor will pay a yearly permit fee of no more than one hundred fifty dollars (\$150) for each type of permit issued. Each drilling machine or pump service rig will be charged a yearly fee of no more than fifty dollars (\$50) each.

(2) Well certification fees will be paid by the well owner and collected and submitted by the well installation or pump installation contractor and will be sent to the division by the contractor within sixty (60) days of completion. This fee will be no more than one hundred twenty-five dollars (\$125) per well.

(3) Well registration fees will be paid by the well owner and collected and submitted by the well installation, heat pump installation, monitoring well installation, monitoring-test hole installation, or pump installation contractor within sixty (60)

days of completion. Registration report forms are required for plugging of wells, raising of casing, lining of wells, deepening of wells, major repairs and alteration to wells, and drilling of jetted wells unless exempted. Concerning the plugging of mineral exploratory wells, the company or person for whom the well is drilled must pay the fee and submit a registration report form. When work performed on a well fits the registration report criteria, and that work is performed by the well owner, the well owner is required to submit the appropriate report form and fee. This fee will be no more than one hundred dollars (\$100) per well. Documentation for holes drilled and plugged under the requirements of 10 CSR 23-6.010–10 CSR 23-6.060 must be submitted on a registration report form.

(4) Monitoring well certification fees will be paid by the owner or primary contractor, collected within sixty (60) days of completion, and submitted to the division by the monitoring well installation contractor. This fee will be no more than one hundred twenty-five dollars (\$125) per well.

(5) Open-loop and closed-loop heat pump well certification fees will be paid by the owner and collected and submitted by the heat pump installation contractor to the division within sixty (60) days of completion. This fee will be determined by the ton rating of the heat pump machine as shown in the following. When more than one (1) heat pump machine is hooked together, the cumulative total of the ton rating will be used to determine the fee. The fee will be no more than:

- | | |
|--|--------|
| (A) One to fifty (1–50) ton heat pump unit | \$150 |
| (B) Over fifty (50) ton heat pump unit | \$250. |

(6) A penalty fee of no more than ten dollars (\$10) a month for up to twenty-four (24) months will be charged to the contractor for any registration report form or certification report form received more than sixty (60) days after the date of completion of the appropriate activity. Two hundred and forty dollars (\$240) will be the maximum late fee per certification or registration report form. The division will provide each permitted contractor with a list of the certification and registration report forms that have been submitted to the division, if requested by the permitted contractor, once per calendar year at no charge.

(7) A penalty fee of no more than forty percent (40%) of the permit fee per year will be assessed when a well installation, heat pump installation, monitoring well installation, monitoring-test hole installation or pump installation contractor fails to either apply or reapply for a permit after the deadline unless they are no longer operating in Missouri. The deadline for original permitting is October 1, 1987, or the date the contractor begins operating in Missouri, whichever date is latest. The deadline for original permitting for a monitoring well installation or heat pump installation contractor is March 10, 1994, or the date the contractor begins operating in Missouri, whichever is latest. The deadline for repermitting is the expiration date on the well installation, heat pump installation, monitoring well installation, monitoring-test hole installation or pump installation contractor's current permit card.

(8) All requests by persons outside the division for lists, copies of the corresponding rules, reports or other publications offered through the division relating to the implementation of the rules under the Well Installation Board will be available for no more than the actual cost incurred by the division.

(9) When a request for the logging of wells core or cuttings is received, the log may be done for a fee of no more than the actual costs involved in production of the log.

(10) Testing fees will be no more than as listed—

- | | |
|--|--------|
| (A) General Test | \$50 |
| (B) Well Driller Contractor Test | \$50 |
| (C) Pump Contractor Test | \$50 |
| (D) Heat Pump Contractor Test | \$50 |
| (E) Monitoring Well Contractor Test | \$50 |
| (F) Monitoring-Test Hole Contractor Test | \$50 |
| (G) Retakes (for each test) | \$50.] |

(1) The following fees shall be assessed:

(A) Permits. A fee of no more than one hundred fifty dollars (\$150) for each type of contractor permit issued or renewed;

(B) Machine and Service Vehicle Permits. An annual fee of no more than fifty dollars (\$50) for each well drilling and pump installation machine and service vehicle;

(C) Certification Reports. A fee of no more than one hundred twenty-five dollars (\$125) per well paid by the well owner and collected and submitted by the well or pump installation contractor;

(D) Registration Reports. A fee of no more than one hundred dollars (\$100) per well paid by the well owner and collected and submitted by the well or pump installation contractor;

(E) Heat Pump Certification Reports. Fees will be paid by the owner and collected and submitted by the heat pump installation contractor. This fee will be determined by the ton rating of the heat pump unit. When more than one (1) heat pump unit is hooked together, the cumulative total of the ton rating will be used to determine the fee. The fee will be no more than—

1. One hundred fifty dollars (\$150) for a heat pump unit less than or equal to fifty (≤ 50) tons; or

2. Two hundred fifty dollars (\$250) for a heat pump unit greater than fifty (> 50) tons;

(F) Late fees.

1. A late fee of no more than ten dollars (\$10) each month charged to the contractor until a complete certification or registration report has been submitted, not to exceed two hundred and forty dollars (\$240) per certification or registration report.

2. A late fee of no more than forty percent (40%) of the permit fee per year will be assessed when a well installation or pump installation contractor fails to renew a permit after the expiration date on the contractor's permit card;

(G) Well logging. Logging of well core or cuttings may be completed for a fee of no more than the actual costs involved in production of the log; and

(H) Test fees will be no more than the following:

- | | |
|------------------------------------|------|
| 1. General Test | \$50 |
| 2. Water Well Contractor Test | \$50 |
| 3. Pump Contractor Test | \$50 |
| 4. Heat Pump Contractor Test | \$50 |
| 5. Monitoring Well Contractor Test | \$50 |
| 6. Test Hole Contractor Test | \$50 |
| 7. Retakes (for each test) | \$50 |

AUTHORITY: sections 256.606, 256.614, 256.623, and 256.626, RSMo [2000] 2016. Emergency rule filed July 2, 1986, effective July 12, 1986, expired Nov. 2, 1986. Original rule filed July 2, 1986, effective Oct. 27, 1986. For intervening history, please consult the Code of State Regulations. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, 111 Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, 111 Fairgrounds Road, Rolla, MO 65401.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—Well Installation
Chapter 2—Fee Structure, Certification, and Registration

PROPOSED RULE

10 CSR 23-2.020 Certification and Registration

PURPOSE: This rule sets standards for certification and registration report submittal for water wells, monitoring wells, heat pump wells, test holes, and pump installations.

(1) For certification and registration report requirements see section 256.614.1, RSMo.

(2) Certification of a well does not guarantee or imply that the well will produce potable or usable quantities of water.

(3) Certification reports.

(A) If the pump is installed within sixty (60) days of the well completion date, the pump information may be included on the well certification report.

(B) If the pump is installed more than sixty (60) days after the well completion date or if a different permitted contractor installs the pump, then the pump installation contractor is responsible for submitting a separate pump report.

(C) A certification report for a replacement pump installation is not required. However, reports may be submitted for replacement pump installations to meet pump installation contractor apprenticeship requirements.

(D) Pump replacement does not change the type or use of the well (i.e., from domestic to multifamily or from domestic to high yield).

(E) A certification report is not needed for temporary monitoring wells, dry holes, or test holes.

(4) Registration reports.

(A) Temporary monitoring wells located on the same monitoring site all may be reported on one (1) registration report with the associated fee, provided the wells are plugged in the same manner. The report shall be submitted within one hundred and eighty (180) days of the date of plugging the first temporary monitoring well.

(B) Test holes shall have registration reports submitted within one hundred and eighty (180) days of the date of completion of plugging and will be held confidentially for a minimum of ten (10) years pursuant to section 256.615.3, RSMo.

AUTHORITY: sections 256.606, 256.614, 256.623, and 256.626, RSMo 2016. Original rule filed June 27, 2018.

PUBLIC COST: This proposed rule will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: The proposed rule will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rule with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, 111 Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, 111 Fairgrounds Road, Rolla, MO 65401.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—[Division of Geology and Land Survey]
Well Installation
Chapter 3—Water Well Construction Code

PROPOSED AMENDMENT

10 CSR 23-3.010 Location of Wells. The board is amending the division Name, chapter name, rule purpose, section (1), removing section (2), and adding Table 3.1.

PURPOSE: This amendment improves readability by replacing unnecessary language with a table.

[Editor's Note: Area maps mentioned in the rule may be found following 10 CSR 23-3.110.]

PURPOSE: This rule sets criteria [as to the areas a] for water well [should be placed] placement.

(1) [A well shall be located consistent with the general layout and surrounding area giving due consideration of the size of the lot, contour of the land, the water table, soil deposits, rock formation, local groundwater conditions and other factors necessary to implement the basic policies that follow:] High yield unconsolidated well location requirements are found in 10 CSR 23-3.010(F). All other well types shall be—

[(A) A well shall be—]

[1.](A) Located on a site [which] that has [good] sufficient surface drainage to prevent the accumulation or ponding of surface water within ten feet (10') of the well and, if possible, at a higher elevation than possible sources of contamination. The top of the casing shall extend [at least one foot (1')] a minimum of twelve inches (12") above [the finished surface grade:] ground surface;

[2. Located so that the well and its surrounding area can be kept in a sanitary condition and provide ready access for repairs, maintenance, and inspection.

3. Adequately sized, designed and developed for the intended use.

4. Constructed so as to maintain existing natural protection against pollution of water-bearing formations and to exclude all known sources of contamination from the well including sources of contamination from adjacent property;

5. Located so that proper drainage in the vicinity of the well shall be provided so as to prevent the accumulation and ponding of surface water within ten feet (10') of the well; and

6. If at all possible, located in areas that do not flood. If no reasonable alternative site exists, wells may be constructed in floodplains provided special construction is included.

The casing of the well shall terminate not less than two feet (2') above the maximum known floodwater elevation or when flooding is eminent, well vent must be sealed and well discontinued from operation until floodwater subsides.]

[(2)(B) [Lateral] Located a minimum setback distance[s] from potential [p/Pollution or [c/Contamination [s/Sources. See 10 CSR 23-3.010 Table 3.1 for specific distances to be followed; and

[(A) A well shall be at least—

1. Three hundred feet (300') from a storage area for commercial fertilizers or chemicals, landfill, lagoon above ground, or underground storage tank, distribution lines for liquid petroleum, petroleum products or chemicals. Petroleum or petroleum products that are not liquid at standard temperatures and pressures are exempt from these setback requirements;

2. Three hundred feet (300') from earthen, concrete or other manure storage structures or lagoons, from land application areas for domestic or animal waste, and from animal composting facilities except as stated in paragraph (2)(A) 4. of this rule;

3. One hundred feet (100') from cesspools and unplugged abandoned wells, except as noted in paragraph (2)(A)6 of this rule;

4. One hundred feet (100') from a subsurface disposal field, grave, single family lagoon, building or yard used for livestock or poultry bird composting facility constructed with a concrete floor cell design covered with a roof, dry litter storage within a poultry building as accumulation of litter occurs during normal facility operations, privy or other contaminants that may drain into the soil;

5. Fifty feet (50') from a buried sewer, septic tank or sewer holding tank, a pit or unfilled space below ground surface, a sump, an existing operating well, except that a well may be drilled closer than fifty feet (50') to a basement and an above ground petroleum storage tank if it is necessary for the operation of the well pump;

6. Wells with casings less than eighty feet (80') in depth and not encountering at least ten feet (10') of impermeous material shall be located at least one hundred fifty feet (150') from cesspools and unplugged abandoned wells and at least one hundred fifty feet (150') from a subsurface disposal field, and septic tank, manure storage pile or similar source of contamination. For example, a manure storage pile would be considered as a potential source of contamination to the well; however, the presence of animals in open pasture in an area would not necessarily concentrate contaminants to the degree that would cause contaminants to enter the groundwater; and]

7. Ten feet (10') from the right-of-way of any federal, state or county road

(B) Waste landfill or lagoons. The safe distance that a well should be located from a waste landfill or waste stabilization ponds (lagoon) cannot be assigned a fixed number because of the varieties of hydrologic and geologic parameters associated with the undetermined types and amounts of materials that may be carried by groundwater from leachates discharged from the waste landfill or waste stabilization ponds (lagoon). It is recommended that wells not be located in an area between the landfill or waste stabilization ponds (lagoons) sites and the point of groundwater discharge to a surface water source. Any well that may intercept leachates from a waste landfill or waste stabilization pond (lagoon) by water withdrawal from the well shall not be used for human consumption and must be plugged unless it is used for a monitoring well.]

(C) [Irrigation] High yield unconsolidated wells [require increased setbacks and] shall be [at least] a minimum of two hundred feet (200') from[—] contamination sources unless greater

distances are specified in 10 CSR 23-3.010(1) Table 3.1.

[1. Sewer lines, septic tanks, lateral fields, pit privy, seepage pits, feed lots, barnyards, fuel, fertilizer and pesticide storage. Fuel, fertilizer and pesticide tanks, up to one thousand gallons (1000 gals.) in capacity will be allowed at well while irrigating and chemigating but must be removed from well site when not is use; and

2. Any well producing potable water.]

Table 3.1 Specific setback distances for wells from pollution or contamination sources.

Feature requiring setback	Minimum horizontal distance
Storage area for commercial fertilizers or chemicals	300'
Demolition landfill	300'
Wastewater treatment plant or lagoon that serves commercial facilities, subdivisions, or mobile home parks	300'
Above ground or underground storage tank ^{1, 2}	300'
Tank distribution lines for liquid petroleum, petroleum products, or chemicals ^{1, 2}	300'
Earthen, concrete, or other manure storage structures or lagoons	300'
Land application areas for domestic or animal waste	300'
Animal composting facilities or Concentrated Animal Feeding Operations (CAFO)	300'
Unplugged abandoned wells	100'
Subsurface wastewater disposal field, grave, residential lagoon, privy, lift station, or pressurized sewer line	100'
Building area or yard used for livestock or poultry that is not defined as a CAFO	100'
An animal composting facility constructed with a concrete floor cell design covered with a roof	100'
Dry litter storage within a building	100'
Other areas with contaminants that may leach into the groundwater	100'
Septic tank or wastewater holding tank	50'
Pit or cistern	50'
Existing operating well	50'
Non-pressurized buried sewer line	25'
Solid waste disposal area, sanitary landfill, special waste landfill, utility waste landfill, waste stabilization pond (lagoon), or hazardous waste treatment, storage, or disposal facility ³	1000'

1. Any well that cannot meet setback distances for petroleum distribution site shall meet the well construction requirements for a High Yield Bedrock well pursuant to 10 CSR 23-3.030(3).
2. Petroleum or petroleum products that are not liquid at standard temperatures and pressures are exempt from these setback requirements.
3. A safe distance cannot be determined. Any well that intercepts leachates from a waste landfill or waste stabilization pond (lagoon) shall be plugged unless it is approved by the department for use as a monitoring well.

AUTHORITY: sections 256.606 and 256.626, RSMo [1994] 2016. Original rule filed April 2, 1987, effective July 27, 1987. For intervening history, please consult the *Code of State Regulations*. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources'

Geological Survey Program attention to Amber Steele at PO Box 250, Ill Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, Ill Fairgrounds Road, Rolla, MO 65401.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—[Division of Geology and Land Survey]
Well Installation
Chapter 3—Water Well Construction Code

PROPOSED AMENDMENT

10 CSR 23-3.020 General Protection of Groundwater Quality and Resources. The board is amending the division name, chapter name, rule purpose, sections (1), (2), (3), and (4), and adding sections (5), (6), (7), (8), and (9).

PURPOSE: This amendment improves readability by removing unnecessary language.

PURPOSE: This rule is for the overall protection of groundwater [quality and] resources in Missouri.

(1) *[Reuse of Water, Disposal, Recharge or Gas Storage Wells.]* Wells shall be constructed for their intended use in a manner that will protect groundwater resources and prevent contamination by surface and groundwater by ensuring the casing and wellhead completion are watertight and sealing off formations that are likely to pose a threat to groundwater.

[(A) A well for the storage of gas or liquid under pressure may not be drilled without first having secured a permit from the Department of Natural Resources in accordance with the Missouri Statutes.

(B) Water used for cooling parts of engines, air compressors or other equipment shall not be returned to any part of the groundwater system. A well shall not be used for disposal or injection of any substance, including surface water, groundwater or any liquid, gas or chemical associated with the drilling of an oil or gas well, including coal bed methane wells, without first receiving a permit from the Underground Injection Control Program's rules and 10 CSR 50-2, Oil and Gas Council, Oil and Gas Drilling and Production. A permit through the Division of Environmental Quality, Water Pollution Control Program may be required.]

(2) A person may not leave a well incomplete or a borehole open and shall plug or complete the well as directed by the department.

[(C)](3) A well previously used for storage or injection of gas, chemical, or any liquid *[under pressure may]* shall not be converted to a well used for water supply.

(4) A person who converts a water well to an oil or gas well shall notify the department pursuant to section 256.614.2, RSMo.

[(2)](5) Maintenance and Repair of Wells.

(A) *[Every w]*Wells shall be maintained by the owner in a condition where it will *[conserve and]* protect *[the]* groundwater *[resources]* and *[where it will]* not be a source of, or channel *[of]* for, contamination or pollution to *[the water supply of that well or any aquifer]* groundwater.

(B) All materials used in the construction, maintenance, *[replacement]* or repair of any well *[subject to these rules]* shall meet the requirements *[of]* in these rules *[for new installation]*.

(C) Broken, punctured, or *[otherwise defective or unserviceable]* damaged casing, *[screens, fixtures, seals]* or any part of the wellhead that is damaged or missing shall be repaired, *[or]* replaced. *[The well shall be plugged in accordance with the requirements these rules if that repair or replacement is not performed], or plugged pursuant to 10 CSR 23-3.110.*

(D) Casing and/or drop pipe when being installed or replaced shall not come in direct contact with the ground surface.

[(D)](E) *[Repairs to]* Major reconstruction of operational wells *[originally completed with the wellhead terminating below ground (buried seal) should include extending the well casing one foot (1') above the finished surface grade. The casing extension material must be of similar material to the original casing (for example, steel to steel and plastic to plastic). On steel casing, the joint must be welded, coupled or threaded.*

On plastic casing, the joint must be glued or fused. All joints and extensions must be sealed to prevent contamination from entering the groundwater. Sealing material must not be a contaminant such as tar. When this type of repair to a well is completed, it must not move at the joint under normal operating conditions. The use of devices specially designed to join dissimilar casing materials together will be considered on a case-by-case basis by the division. Approval must be received in advance.] in existence on September 28, 1985 (pre-law wells) shall conform to minimum standards pursuant to 10 CSR 23-3. Major reconstruction of wells does not include pulling or setting a pump or plumbing alterations.

(6) Lubricants used during the drilling process shall not adversely affect the groundwater quality by entering the borehole.

(7) Water used in the drilling process or well development shall be of potable quality.

(8) Best management practices such as silt fences, straw bales, containment pits, or basins shall be used to contain drill cuttings, fluid, and foam resulting from drilling operations to minimize impact to land and prevent a discharge to waters of the state. If a discharge to a water of the state occurs, notify the department.

[(3)](9) Cross connections between wells and other systems or equipment containing water, chemicals, or *[other]* substances of unknown *[or questionable safety, including pesticides and fertilizers,]* risk to groundwater are prohibited, except *[where]* when equipped with a suitable protective device such as a break tank or backflow *[preventer which is approved by the division and which the owner agrees to install, test and maintain to assure proper operation.]* prevention device. The owner shall test, retain all records of such tests, and maintain the backflow prevention device to ensure proper operation and protection of groundwater pursuant to 10 CSR 23-3.050(1)(C). Petroleum, fertilizer, and pesticide tanks will be allowed at the well site while irrigating and chemigating and be removed from the well site or emptied when not in use.

[(4) All other wells except those specifically exempted by the law shall be constructed and maintained in accordance with standards from the division].

AUTHORITY: sections 256.606, 256.614, 256.615, and 256.626, RSMo [Supp. 1991] 2016. Original rule filed April 2, 1987, effective July 27, 1987. Emergency amendment filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Amended: Filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—[Division of Geology and Land Survey]
Well Installation
Chapter 3—Water Well Construction Code

PROPOSED AMENDMENT

10 CSR 23-3.030 Standards for Construction of Water Wells. The board is amending the division name, chapter name, rule title, rule purpose, sections (1)–(5), and removing sections (6)–(20). The board is also adding Tables 3.2 through 3.6 and removing Tables 1 and 2, Steel Casing Table, Gravity Grouting Table, Forty Foot (40') Grout Table, and Twenty Foot (20') Grout Table.

PURPOSE: This amendment improves readability by removing unnecessary language and incorporates substantive requirements from 10 CSR 23-3.070 Plastic Well Casing.

*PURPOSE: This rule describes the minimum **construction** standards for [a properly constructed] **water wells**. [but does not apply to community or noncommunity public water supply wells. It is the obligation and responsibility of the driller to construct community and noncommunity wells following procedures set forth by the Missouri Public Drinking Water rules.]*

[(1) Casing for Permanent Wells. Steel well casing used for the outside casing must be new and shall be of at least six-inch (6") nominal size (6.625 outside diameter in inches, actual dimensions), thirteen pounds (13 lbs.) per foot, 0.188 wall thickness. Coated casings are permitted as long as they are not a source of contamination to the groundwater. Larger diameter casing shall have minimum weights and thicknesses as specified in subsection (1)(G) of this rule. Concrete casing is permitted for use. Casing for permanent wells shall be of ferrous material, or where permitted by rule, plastic or concrete material. For ferrous pipe, the specifications and installation procedures are prescribed as follows. For plastic pipe, the specifications and installations procedures are prescribed in 10 CSR 23-3.070.

(A) Casing Joints. A protective well casing shall have watertight joints throughout its length. The joints shall be made by being continuously welded, threaded or other types of joints given written approval by the division. Tongue and groove type of joints are acceptable for concrete casings. Recessed or reamed and drifted couplings shall be used on threaded casing, or as an alternate, other couplings can be used but the design, taper and type of thread of the coupling shall match that of the pipe. Other casing design or materials shall be approved only by official written order of the division.

(B) Standard for Pipe. Pipe used as the casing in the permanent construction of a well shall be new pipe produced to recognized standards of the American Society for Testing and Materials, A53 grade A or B, A500 grade A or B, or A589 or other grade weldable new pipe having a quality equal to or greater than those specified. New pipe, when salvaged within thirty (30) days of the drilling of a well for water supply may be used as new pipe if still in new condition and must be decontaminated.

(C) Inside Casing Diameter. Under no condition shall the casing inside diameter be less than six inches (6") unless specifically exempted in 10 CSR 23-3 except for a driven well point or jetted well which shall be equipped with a casing pipe of at least one and one-fourth inches (1 1/4") inside diameter. The well shall also be of sufficient diameter to receive a pump or pumping apparatus of sufficient size to discharge the design capacity including anticipated decline in water levels.

(D) Vertical Extension. A well casing or its extension shall extend vertically at least one foot (1') above the finished surface grade. If the well is located in a floodplain see 10 CSR 23-3.010(1)(A)6. for requirements.

(E) A table of minimum specifications for steel casing for domestic, multifamily, high yield and unconsolidated material irrigation wells and bedrock irrigation wells follows: (A variance must be obtained in advance from the division to install casing not on this table.)

STEEL CASING TABLE

Domestic and Multi-Family Well

<i>Nominal Pipe Size In Inches</i>	<i>Outside Diameter In Inches</i>	<i>Wall Thickness In Inches</i>	<i>Weight/Foot</i>
6	6.625	.188	13 lbs.

High Yield and Bedrock Irrigation Well

<i>Nominal Pipe Size In Inches</i>	<i>Outside Diameter In Inches</i>	<i>Wall Thickness In Inches</i>	<i>Weight/Foot</i>
6	6.625	.280	19 lb.
8	8.625	.322	29 lb.
10	10.75	.365	40 lb.
12	12.75	.375	50 lb.
14	14.00	.375	55 lb.
16	16.00	.375	63 lb.
18	18.00	.375	71 lb.
20	20.00	.375	79 lb.
22	22.00	.500	115 lb.
24	24.00	.500	125 lb.
26	26.00	.500	136 lb.
28	28.00	.500	147 lb.
30	30.00	.500	158 lb.
32	32.00	.500	168 lb.
34	34.00	.500	179 lb.
36	36.00	.500	190 lb.

Unconsolidated Material Irrigation Well

<i>Nominal Pipe Size In Inches</i>	<i>Outside Diameter In Inches</i>	<i>Wall Thickness In Inches</i>	<i>Weight/Foot</i>
6	6.625	.188	13 lb.
8	8.625	.188	17 lb.
10	10.75	.188	21 lb.
12	12.75	.188	25 lb.
14	14.00	.188	28 lb.
16	16.00	.188	32 lb.

(2) *Minimum Protective Depths of Well Casing.* All wells shall be watertight to such depth as may be necessary to exclude contaminants. A well shall be constructed so as to seal off formations that are likely to pose a threat to the aquifer or human health. Requirements will be fulfilled to the minimum extent when the protective casing has been installed in conformity with the applicable construction set forth in 10 CSR 23-3.030–10 CSR 23-3.110. Sections (17)–(20) state the amount of grout needed to fill the minimum required amount of annular space in the different areas across Missouri. Where it is not feasible to follow the standards contained in this part, the permittee shall obtain approval of the division as to the design of the well before proceeding. The acceptability of the formation for well development shall be based on the satisfactory results of analysis of the water. Any water-bearing formation yielding water which is contaminated, as evidenced by the presence of chemicals or bacteria which may be harmful, shall be regarded as unsatisfactory for use as a potable supply unless adequate treatment is provided. The division will decide acceptable water treatment measures only after all well construction remedies have been exhausted.

(3) Grouting.

(A) *Grouting Required for Wells.* It is the obligation and responsibility of the well installation contractor to ensure that the annular space is sealed and that the casing does not leak. This obligation and responsibility ends three (3) years after the date of certification unless it can be shown that the well seal has been damaged by other persons. The following is a list of approved grouting methods:

1. *Gravity installation method.* The grout is poured into the annular space without the use of a tremie or grout pipe. Cement or bentonite slurry may never be poured through standing water without the use of a tremie pipe. The Gravity Grouting Table is a table which states the minimum requirements concerning the depth that grout can be gravity fed in wells that have an annulus from one inch to two inches (1"–2"). This table reflects the use of actual drill bit sizes and a six and five-eighths-inch (6 5/8") outside diameter casing. Nominal sizes may not be used when determining the annular space. Contact the division for instructions concerning grouting wells with larger than a two-inch (2") annulus. Note: When using plastic casing, a larger hole is recommended due to the belled casing ends reducing the annular space.

Gravity Grouting Table

Size Hole (inches)	Outside Diameter of Casing (inches)	Annular Space (inches)	Gravity Feed Depth (feet)
8 5/8	6 5/8	1	100
8 3/4	6 5/8	1 1/16	106
8 7/8	6 5/8	1 1/8	112
9	6 5/8	1 3/16	119
9 1/8	6 5/8	1 1/4	125
9 1/4	6 5/8	1 5/16	131
9 3/8	6 5/8	1 3/8	137
9 1/2	6 5/8	1 7/16	144
9 5/8	6 5/8	1 1/2	150
9 3/4	6 5/8	1 9/16	156
9 7/8	6 5/8	1 5/8	162
10	6 5/8	1 11/16	169
10 1/8	6 5/8	1 3/4	175
10 1/4	6 5/8	1 13/16	181
10 3/8	6 5/8	1 7/8	187
10 1/2	6 5/8	1 15/16	193
10 5/8	6 5/8	2	200

2. *Tremie method.* In this method the grout is placed in the annular space by gravity through a tremie or grout pipe suspended in the annular space. The tremie pipe is placed into the annulus and extends to within five feet (5') from the bottom of the interval to be grouted. The grout is added into the tremie pipe which should remain submerged in the grouting material during the entire time the grout is being placed. The tremie pipe is gradually withdrawn as the grouting material is placed or may be removed after the annular space is full and before the grout sets;

3. *Pressure grouting through tremie method.* For this method the same procedure is followed as described in the tremie method, except the grout is pumped into the tremie pipe instead of placed by gravity flow;

4. *Pressure grouting through the casing method.* Instead of using a tremie pipe placed in the annular space a grout pump is attached to the top of the casing and grout pumped through the casing and allowed to fill the annular space from the bottom. Pumping continues until grout reaches the surface of the annular space. Grout must be allowed to set up before drilling continues;

5. *Open-hole method.* Grout is poured into the drill hole from the surface and allowed to fill the drill hole to the required level. Note: Much more grout is required to fill the bottom thirty feet (30') of drill hole when using the open-hole method. See 10 CSR 23-3.030(17)–(20) for specific amounts. Then the casing is placed into the drill hole through the grouting material. This method may not be used if water is standing in the drill hole unless grout is placed by one (1) of the tremie grouting methods or if bentonite chips are used, they must be allowed to completely hydrate before the casing is pushed into the grout;

6. *Positive displacement method.* Casing is set into the borehole to a point about five feet (5') above the casing point. Grout is poured into the well casing followed by a drillable plug. This is designed to push all grout to the bottom of the well. If there is water in the borehole and bentonite or cement slurry is used it must be emplaced via a tremie to the bottom of the borehole. The plug is pushed to the bottom of the casing forcing the grout down the inside of the casing and up the annular space. The casing is then set into the bottom of the drill hole; and

7. *Other grouting methods must be approved by the division in advance.*

(4) Approved Grouting Methods.

(A) *Neat Cement Grout.* Neat cement grout is a mixture of one (1) bag, ninety-four pounds (94 lbs.) of Portland cement (ASTM C150) to not more than six (6) gallons of clean water. Bentonite, up to six percent (6%) by weight of cement to reduce shrinkage or other additives (ASTM C688) to reduce permeability or control time of set or both, may be used. If bentonite is used, additional water should be added to the mix.

(B) *Bentonite Grout.* Sodium bentonite (swelling clay) is available in many forms from granules to pellets to chips. When grouting annular spaces with nonslurry bentonite, great care must be exercised to ensure the bentonite is placed properly. Flash swelling may occur and bridge off the annular space preventing an adequate seal when using powdered, granular, tablets or pelletized bentonite. Therefore, only bentonite specifically designed to prevent flash hydration and to fall through standing water may be used. Chipped or pelletized bentonite may not be used in annular spaces less than one inch (1"). Bentonite must be applied slower than manufacturer's specifications. If there is no water in the annular space, the bentonite must be hydrated after each bag or water poured into the hole before application of the

bentonite.

(C) *Bentonite Slurry Grout.* Sodium bentonite slurry grout is a bentonite/water mixture. There are many additives available that effect viscosity and set-up time. These additives are acceptable unless they are a potential contaminant. Bentonite slurry must have a solids content of at least twenty percent (20%).

(D) *Other Grout Types.* Other types of grout may be used when necessary if prior approval by the division is granted.

(5) *Drill cuttings used by themselves or in conjunction with a drive shoe, packer or boot are not approved materials for grouting the annulus of any well.*

(6) *Grouting required for Community and Noncommunity Public Water Supply Wells.* It is the obligation and responsibility of the driller to follow procedures set forth by the Missouri public drinking water rules.

(7) *Driven Casing Wells.* The bottom of the steel well casing shall be equipped with a drive shoe or otherwise protected from damage during construction of the well as dictated by drilling procedures and conditions of each particular well (see 10 CSR 23-3.100(4)(D)3. for grouting techniques).

(8) *Capping.* Temporary capping of a well until the pumping equipment is installed shall allow no pollution or foreign objects to enter the well.

(9) *Alignment.* A well shall not vary from the vertical or alignment so as to interfere with installation and operation of the pump.

(10) *Well Development.* The well shall be developed to remove any material deposited on the aquifer face during the drilling, drilling fluid and the predetermined finer fraction of a gravel pack, all of which shall be done to ensure that the maximum practical specific capacity will be obtained from the completed well.

(11) *For further construction requirements for domestic wells see 10 CSR 23-3.090 Regionalization and 10 CSR 23-3.100 Sensitive Areas.*

(12) *Multifamily wells are water supply wells constructed for the purpose of serving more than three (3) dwellings but having less than fifteen (15) service connections and regularly serves less than twenty-five (25) individuals daily at least sixty (60) days out of the year. A multifamily well must be constructed as follows:*

(A) *Minimum casing lengths for multifamily wells are the same as domestic wells. Liner may not substitute for casing;*

(B) *The drill hole shall be constructed a minimum of ten inches (10") in diameter. An increase in hole size to ten and five-eighths inches (10 5/8") in diameter will be effective May 1, 1999. The drill hole must be at least four inches (4") in diameter larger than the outside diameter of the steel casing to be installed;*

(C) *The casing used must be of ferrous material and conform to size, wall thickness and weight/foot parameters set out in subsection (1)(E), for multifamily wells. Plastic casing may be used if approved in advance on a case-by-case basis;*

(D) *The casing must be grouted full-length with grout utilizing the tremie method or one (1) of the pressure grouting methods set out in section (3) of this rule;*

(E) *The neat cement grout must be allowed to set up based on the parameter of the following:*

1. *Hi-early cement—minimum of twelve (12) hours;*

2. *Portland Type I cement—minimum of seventy-two (72) hours; and*

3. *High solids bentonite slurry—varies based on additives and manufacturer's specifications; and*

(F) *When drilling starts, after cement has set, care should be taken when drilling out the bottom of the casing so that curing cement is not damaged.*

(13) *Unconsolidated Material Irrigation Well.* A well drilled into alluvial, glacial drift or glacial outwash aquifers that is not deeper than two hundred feet (200') and produces water not for human consumption shall conform to the following construction requirements:

(A) *The selection of casing shall take into consideration the stress to which the pipe will be subjected during construction and the corrosiveness of the groundwater. Used pipe is prohibited. If steel casing is selected, see subsection (1)(E) Steel Casing Table, for size, wall thickness and weight per foot specifications. If plastic casing is selected (see 10 CSR 23-3.070 for specifications);*

(B) *Unconsolidated material irrigation wells greater than two hundred feet (200') in depth must be constructed using bedrock irrigation specifications contained in section (14);*

(C) *The drill hole shall be constructed a minimum of four inches (4") in diameter larger than the outside diameter of the casing to be installed;*

(D) *Set Screen and Casing.* Screen openings shall provide the maximum amount of open area consistent with strength of screen and the grading of the water-bearing formation and gravel pack. The openings shall permit maximum transmitting ability without clogging or jamming;

(E) *Gravel Pack.* All gravel placed into well shall be clean, washed and disinfected prior to placement or provisions made for disinfection in place. When an oversized drill hole is constructed to permit the placement of a gravel wall around the well screen and casing, grouting and sealing may be suspended for sixty (60) days to allow for gravel to settle and for well development; and

(F) *Grouting.* After the well has been developed and pumped, but in no case later than sixty (60) days, dig around the well to a depth of four feet to five feet (4'–5') and fill with sodium bentonite granules, pellets, tablets or chips. Bentonite slurry or organic polymers shall not be used.

(14) *Bedrock Irrigation Well.* These wells are drilled into bedrock aquifers that are constructed to meet required standards and are equipped with a pump that has the capacity to produce more than seventy (70) gallons of water per minute. The produced water is for irrigating crops but may be used for human consumption. This type of well shall conform to the following construction requirements:

(A) *The minimum amount of casing set must be determined by the division in advance on a casing point request form. A casing point request form is available from the division;*

(B) *The drill hole shall be constructed a minimum of ten inches (10") in diameter. The drill hole must be at least four inches (4") in diameter larger than the outside diameter of the steel casing to be installed;*

(C) *The casing used must be of ferrous material and conform to size, wall thickness and weight/foot parameters set out in subsection (1)(E), for high yield and bedrock irrigation wells; and*

(D) *The casing must be grouted full-length with neat cement grout utilizing the tremie method or one (1) of the pressure grouting methods set out in section (3).*

(15) *High Yield Well.* Those wells that are constructed to

meet required standards and are equipped with a pump that has the capacity to produce more than seventy (70) gallons of water per minute.

(A) The minimum amount of casing set must be determined by the division in advance on a casing point request form. A casing point request form is available from the division.

(B) The drill hole a minimum of ten inches (10") in diameter shall be constructed. The drill hole must be at least four inches (4") in diameter larger than the outside diameter of the steel casing to be installed.

(C) The casing must be of ferrous material and conform to size, wall thickness and weight/foot parameters set out in subsection (1)(E), for high yield and bedrock irrigation wells.

(D) The casing must be grouted full-length with neat cement grout utilizing the tremie method or one (1) of the pressure grouting methods set out in section (3).

(16) *Lubricants Used During the Drilling Process.* During the drilling of a well, some lubricants may be necessary to ensure protection of the drilling machine. The lubricants used must not adversely affect the groundwater quality and must be biodegradable. Special care must be taken to ensure leaking hoses on the drilling machine do not allow harmful lubricants or fluids to enter the borehole.

(17) Most domestic bedrock wells drilled in the state have an eight and five-eighths-inch (8 5/8") hole drilled to casing point and a six and five-eighths-inch (6 5/8") outside diameter casing installed into bedrock. The rules state that the bottom thirty feet (30') of the annulus must be grouted. Table 1 states the minimum amount of grout required to fill the bottom thirty feet (30') of annulus taking into account the use of a six and five-eighths-inch (6 5/8") outside diameter casing, borehole size differences, type of grout utilized, and method of emplacement of the grout.

TABLE 1
*Number of Bags for Minimum Amount of Required Grout for a
Domestic Bedrock Water Well*

Outer Diameter of Steel/Plastic Casing: 6 5/8 Inches—Minimum Length of Grout: 30 feet

<i>Borehole Diameter</i>	<i>8 5/8"</i> <i>*Ann.^O.H.</i>	<i>8 3/4"</i> <i>*Ann.^O.H.</i>	<i>9"</i> <i>*Ann.^O.H.</i>	<i>10"</i> <i>*Ann.^O.H.</i>	<i>10 5/8"</i> <i>*Ann.^O.H.</i>	<i>11"</i> <i>*Ann.^O.H.</i>
<i>Type of Grout</i>						
CEMENT						
Portland Type I	5 11	5 11	6 12	8 15	10 17	12 18
Portland Type III	5 11	5 11	6 12	8 15	10 17	12 18
BENTONITE						
<i>Pellets—</i>						
1/2" Baroid Pellets	7 17	7 17	8 18	13 22	15 25	17 27
3/8" Baroid Pellets	7 17	8 18	9 19	13 23	16 27	18 28
1/4" Baroid Pellets	7 17	8 19	19 13	23 16	26 18	28 28
Wyo-Bend Tablets	8 18	8 19	9 20	14 25	17 28	19 30
Volclay 1/2"	8 19	8 19	9 20	14 25	17 28	19 30
Volclay 3/8"	8 19	8 20	10 21	14 26	18 29	20 31
Volclay 1/4"	8 20	9 20	10 22	15 27	18 30	21 32
<i>Chips—</i>						
Baroid HolePlug	7 18	8 18	9 19	13 24	16 27	18 29
Wyo-bend Coarse	6 15	7 15	7 16	11 20	14 22	15 24
Wyo-bend Medium	6 15	7 16	8 17	12 21	14 23	16 25
Volclay Coarse	7 16	7 17	8 18	12 22	15 25	17 27
Volclay Medium	7 17	7 17	8 18	13 23	16 26	17 27
<i>Granular—</i>						
Benseal	6 15	7 16	8 17	12 21	14 23	16 25
Wyo-bend No. 8	6 15	7 15	7 16	11 20	14 22	15 24
Wyo-bend No. 16	6 15	7 15	7 16	11 20	14 22	15 24
<i>Slurry—</i>						
Baroid	1 4	2 4	2 4	3 5	3 5	4 6
Wyo-bend	2 4	2 4	2 4	3 5	4 6	4 6
Volclay	1 3	2 4	2 4	3 5	3 5	4 6

*Ann. = Bags needed to fill Annular Space

^O.H. = Bags needed to fill the Open Bore Hole

(18) Most alluvial domestic wells drilled in the state have a ten and five-eighths-inch (10 5/8") hole drilled and a six and five-eighths-inch (6 5/8") outside diameter casing installed. The rules state that the top twenty feet (20') of annulus must be grouted. The following amounts of grout are necessary, at a minimum, to fill this space: Table 2 states the minimum amount of grout required to fill the top twenty feet (20') of annulus taking into account the use of a six and five-eighths-inch (6 5/8") outside diameter casing and screen, borehole size differences, type of grout utilized, and method of emplacement of the grout.

TABLE 2
Number of Bags for Minimum Amount of Required Grout for
Domestic Unconsolidated Water Wells

Outer Diameter of Steel/Plastic Casing: 6 5/8 inches—Minimum Length of Grout: 20 feet

Borehole Diameter	10 5/8" *Ann.^O.H.	12 5/8" *Ann.^O.H.	14 5/8" *Ann.^O.H.	16" *Ann.^O.H.	18" *Ann.^O.H.
Type of Grout					
CEMENT					
Portland Type I	7 11	12 16	17 21	21 26	28 32
Portland Type III	7 11	12 16	17 21	21 26	28 32
BENTONITE					
Pellets—					
1/2" Baroid Pellets	10 17	17 24	25 32	32 38	42 48
3/8" Baroid Pellets	11 18	18 25	27 33	33 40	44 51
1/4" Baroid Pellets	11 18	18 25	26 33	33 40	44 50
Wyo-Bend Tablets	11 19	19 26	28 35	35 42	46 53
Volclay 1/2"	11 19	19 27	28 36	35 43	47 54
Volclay 3/8"	12 19	20 27	29 37	36 44	48 56
Volclay 1/4"	12 20	20 28	30 38	38 45	50 57
Chips—					
Baroid HolePlug	11 18	18 25	27 34	34 41	44 51
Wyo-bend Coarse	9 15	15 21	23 28	28 34	37 43
Wyo-Bend Medium	9 15	16 22	23 29	29 35	38 44
Volclay Course	10 17	17 23	25 31	31 38	42 48
Volclay Medium	10 17	17 24	26 32	32 39	42 49
Granular—					
Benseal	9 16	16 22	23 29	29 35	39 45
Wyo-bend No. 8	9 15	15 21	23 28	28 34	37 43
Wyo-bend No. 16	9 15	15 21	23 28	28 34	37 43
Slurry—					
Bariod	2 4	4 5	6 7	7 8	9 10
Wyo-bend	2 4	4 5	6 7	7 9	10 11
Volclay	2 3	4 5	5 7	7 8	9 10

*Ann. = Bags needed to fill Annular Space

^O.H. = Bags needed to fill the Open Bore Hole

(19) When drilling in Area 2 or 3, under certain circumstances, domestic wells may be constructed where the upper forty feet (40') of annulus is grouted. This annulus is created by a ten and five-eighths-inch (10 5/8") hole and a five and one-half-inch (5 1/2") outside diameter casing. The following amounts of grout are necessary, at a minimum, to fill this space:

Grout Material	Size	Amount to Fill 40' of Annulus	
		Open-Hole Method	All Other Methods
Bentonite (50 lb.)	Medium chip	30.0 bags	21.5 bags
	Coarse chip	30.0 bags	21.5 bags
	#8 mesh (cannot be poured through water)	30.0 bags	21.5 bags
Cement Slurry (one 94 lb. bag with 6 gallons water) (must be tremmied through standing water)		23.0 sacks	16.5 sacks

(20) Domestic wells drilled in Area 5 can have casing as small as four and one-half-inch (4 1/2") outside diameter placed in a hole that is eight and five-eighths-inch (8 5/8") in diameter. To grout the upper twenty feet (20') of this type of well the following amounts of grout are necessary, at a minimum, to fill this space:

Grout Material	Size	Amount to Fill 20' of Annulus	
		Open-Hole Method	All Other Methods
Bentonite (50 lb.)	Medium chip	10.2 bags	7 bags
	Coarse chip	10.0 bags	7 bags
	#8 mesh (cannot be poured through water)	10.0 bags	7 bags
Cement Slurry (one 94 lb. bag with 6 gallons water) (must be tremmied through standing water)]		7.5 sacks	5.5 sacks

(1) Domestic Water Wells and Pilot Holes.

(A) Casing.

1. Steel well casing. The minimum standards for steel casing are found in Table 3.2.

Table 3.2 Minimum standards for steel casing.

Nominal Pipe (Inches)	Outside Diameter (Inches)	Wall Thickness	
		(Inches)	(Weight/Foot)
6	6 3/4	0.188	13
8	8 3/4	0.188	17
10	10 3/4	0.188	21
12	12 3/4	0.188	25
14	14	0.188	28
16	16	0.188	32

A. Joints. Joints shall be welded or threaded and be watertight. Recessed or reamed and drifted couplings shall be used on threaded casing. Other couplings may be used provided the design, taper, and type of thread of the coupling matches that of the pipe. Casing extension material shall be of similar material to the original casing. Other types of joints or devices used to join dissimilar casing extension materials may be used upon receiving prior written approval from the department.

B. Standards. Casing shall be new and meet American Society for Testing and Materials (ASTM), A53 grade A or B, A500 grade A or B, or A589 or other grade weldable new pipe having a quality equal to or greater than those specified. Used casing when salvaged within ninety (90) days of installation from a water supply well and is decontaminated is considered new pipe.

C. Drive shoe. In areas where steel casing is required, equip the well casing with a drive shoe or similar protective device to prevent damage to the well casing during construction of the well. If no drive shoe is used, follow the minimum grout

cure times in Table 3.3.

Table 3.3 Minimum Cure Times for Grout

Grout Type	Minimum Cure Time (hours)
Hi early cement	12
Portland Type I cement	72
Chipped Bentonite	4
High Solids Bentonite Slurry	2

*Follow manufacturer's guidelines. Cure time will vary based on additives.

2. Plastic well casing. The minimum standards for plastic well casing are found in Table 3.4.

Table 3.4 Minimum standards for plastic casing.

Nominal Pipe (Inches)	Outside Diameter (Inches)	Standard Dimension Ratio (SDR)	Schedule (SCH)
6	6 5/8	26	40

A. Joints. Well casing joints shall be watertight and joined by solvent weld (glued) or mechanical. Casing extension material shall be of similar material to the original casing. Other types of joints or devices used to join dissimilar casing extension materials may be used upon receiving prior written approval from the department.

B. Standards. Casing shall be: new and meet ASTM standards, composed of polyvinyl chloride (PVC) or acrylonitrile-butadiene-styrene (ABS) thermoplastics and meet ASTM standards, marked "Well Casing" and have the specification number F-480 Standard for Plastic Well Casing. Used casing when salvaged within ninety (90) days of installation from a water supply well and is decontaminated is considered new pipe.

C. Packers. A packer, coupling, or inverted bell shall be secured at the bottom of the casing and hold the grout in place while drilling continues. No packer, coupling, or inverted bell is needed if grout is allowed to cure following minimum cure times in Table 3.3.

3. Concrete and fiberglass well casing—

A. May be used for unconsolidated wells greater than eighteen inches (18") in diameter; and

B. Shall be composed of non-toxic durable material designed for use in potable water wells.

4. Other materials may be used upon receiving prior written approval from the department.

(B) Borehole. For borehole size see 10 CSR 23-3.090.

(C) Grouting. It is the responsibility of the well installation contractor to ensure that the annular space is sealed and that the casing does not leak. This responsibility ends three (3) years after the approval date by the department unless it can be proven that the annular seal has been damaged by other persons.

1. Grouting installation methods.

A. Gravity method.

(I) Bentonite granules or bentonite slurry shall not be poured through standing water greater than one hundred feet (> 100').

(II) Table 3.5 states the maximum depth that grout can be gravity fed into the well annulus.

(III) Gravity grouting greater than two hundred feet (200') in a four inch (4") annulus is not allowed.

Table 3.5 Maximum Gravity Grouting Depths

Borehole Size (inches)	Outside Diameter of Casing (inches)	Annular Space (inches)	Gravity Feed Depth (feet)
8 3/4	6 5/8	1	100
8 3/4	6 5/8	1 1/16	106
8 3/4	6 5/8	1 1/8	112
9	6 5/8	1 3/16	119
9 1/4	6 5/8	1 1/4	125
9 1/4	6 5/8	1 5/16	131
9 1/4	6 5/8	1 3/8	137
9 1/2	6 5/8	2 3/8	144
9 5/8	6 5/8	3	150
9 5/8	6 5/8	3 1/8	156
9 5/8	6 5/8	3 1/4	162
10	6 5/8	3 3/8	169
10 1/4	6 5/8	3 1/2	175
10 1/4	6 5/8	3 5/8	181
10 3/8	6 5/8	3 3/4	187
10 1/2	6 5/8	3 7/8	193
10 5/8	6 5/8	4	200

B. Tremie method. Tremie pipes shall be—

(I) Placed into the annulus and extend to no less than five feet (5') from the bottom of the interval to be grouted;

(II) Gradually withdrawn as the grouting material is emplaced; and

(III) No greater than ten feet (10') above the emplaced grouting material during the entire grouting process.

C. Tremie pressure method. The tremie pipe shall remain submerged in the grouting material during the entire grout pumping process.

D. Pressure method.

E. Open-hole method.

(I) Non-slurry bentonite may be poured from the surface and allowed to completely hydrate before the casing is installed.

(II) Bentonite slurry may be used in wells with more than one hundred feet (>100') of standing water only if the grout is emplaced by one (1) of the tremie grouting methods.

F. Positive displacement method.

(I) Bentonite slurry or cement slurry may be used in wells with more than one hundred feet (>100') of standing water only if the grout is emplaced by one (1) of the tremie grouting methods.

G. Other grouting methods may be used upon receiving prior written approval from the department.

2. Grout materials.

A. Cement slurry.

B. Bentonite slurry.

C. Bentonite non-slurry. If there is no water in the annular space, the bentonite shall be hydrated.

D. Other grout types may be used upon receiving prior written approval from the department.

(D) Driving Casing.

1. When geologic conditions require the casing to be driven, the casing may be driven to the casing depth without adding grout.

2. Once the casing is set, install liner pursuant to 10 CSR 23-3.080.

3. In addition to the liner, a top annular casing seal, at least ten feet (10') deep is required below the pitless connection.

4. A liner and top annular seal are not required when the open hole method or positive displacement grouting method is used.

(E) Wellhead Completion. Follow well casing seal and connection installation pursuant to 10 CSR 23-3.050(6).

(2) Multifamily Wells.

(A) Multifamily wells shall have no more than eight (8) connections, fewer than twenty-five (25) individuals, and have a pumping capacity of less than seventy gallons per minute (<70 gpm).

(B) Multifamily wells may be used to serve a charitable or benevolent organization pursuant to section 640.116, RSMo.

(C) Casing.

1. Follow 10 CSR 23-3.090 for minimum casing depths by Drilling Area for domestic water wells.

2. Install new steel casing that meets the minimum standards specified in Table 3.2 for size and weight.

3. Other casing design or materials may be used upon receiving prior written approval from the department.

4. Liners are not a substitute for casing.

(D) Joints. Well casing joints shall be welded or threaded and be watertight. Other types of joints may be used upon receiving advanced written approval by the department. Recessed or reamed and drifted couplings shall be used on threaded casing; other couplings may be used provided the design, taper, and type of thread matches that of the pipe.

(E) Standards. Pipe shall be new and meet the ASTM, A53 grade A or B, A500 grade A or B, or A589 or other grade weldable new pipe having a quality equal to or greater than those specified. Used pipe is considered new if it is salvaged within ninety (90) days of installation from a new water well.

(F) Drive shoe. Equip the well casing with a drive shoe or similar protective device to prevent damage to the well casing during construction of the well.

(G) Borehole. Construct the borehole a minimum of ten and five-eighths inches (10 5/8") in diameter to the casing depth. Larger casing may be installed provided the borehole is a minimum of four inches (4") larger in diameter.

(H) Grouting. Grout the annular space of the well full length. It is the responsibility of the well installation contractor to ensure that the annular space is sealed and that the casing does not leak. This responsibility ends three (3) years after the date of approval by the department unless it can be proven that the well seal has been damaged by another person.

1. Grouting installation methods.

A. Tremie method pursuant to 10 CSR 23-3.030(1)(C)1.B.

B. Tremie pressure method pursuant to 10 CSR 23-3.030(1)(C)1.C.

C. Pressure method pursuant to 10 CSR 23-3.030(1)(C)1.D.

2. Grout materials.

A. Grout types pursuant to 10 CSR 23-3.030(1)(C)2. may be used except powdered or granular non-slurry bentonite.

B. Other grout types may be used upon receiving prior written approval from the department.

(I) Wellhead Completion. The wellhead shall be completed pursuant to 10 CSR 23-3.050(6).

(3) High yield bedrock wells or high yield unconsolidated wells two hundred feet (200') or more in depth.

(A) Casing.

1. The minimum amount of casing shall be determined by the department in advance.

2. Install new steel casing that meets the minimum standards specified in Table 3.6 for size and weight.

3. In lieu of steel casing, unconsolidated wells two hundred feet (200') or more in depth may use Schedule 80 or Standard Dimension Ratio 21 (SDR 21) plastic casing.

4. Liners are not a substitute for casing.

5. Other design or materials may be used upon receiving prior written approval from the department.

Table 3.6 Minimum steel casing requirements for high yield bedrock wells and high yield unconsolidated wells two hundred feet (200') or more in depth.

Nominal Pipe (inches)	Outside Diameter (inches)	Wall Thickness (inches)	Weight per foot (lbs.)
6	6 ¾	0.280	19
8	8 ¾	0.322	29
10	10 ¾	0.365	40
12	12 ¾	0.375	50
14	14	0.375	55
16	16	0.375	63
18	18	0.375	71
20	20	0.375	79
22	22	0.500	115
24	24	0.500	125
26	26	0.500	136
28	28	0.500	147
30	30	0.500	158
32	32	0.500	168
34	34	0.500	179
36	36	0.500	190

(B) Joints, Standards, Drive shoe, Borehole, Grouting, and Wellhead Completion shall be followed pursuant to 10 CSR 23-3.030(2)(D) to 10 CSR 23-3.030(2)(I).

(4) High yield unconsolidated wells less than two hundred feet (<200').

(A) High yield unconsolidated wells less than two hundred feet (<200') in depth.

1. Install a minimum of twenty feet (20') of casing.

2. Install new steel or plastic casing that meets the minimum standards specified in Table 3.2 or Table 3.4, respectively.

3. Other design or materials may be used upon receiving prior written approval from the department.

(C) Borehole. Construct the borehole pursuant to 10 CSR 23-3.030(2)(G).

(D) Grouting. Install a ten foot (10') minimum top grout seal. It is the responsibility of the well installation contractor to ensure that the annular space is sealed and that the casing does not leak. This responsibility ends three (3) years after the date of approval by the department unless it can be proven that the annular seal has been damaged by another person.

1. Grouting installation methods.

A. Gravity method pursuant to 10 CSR 23-3.030(1)(C)1.A.

B. Tremie method pursuant to 10 CSR 23-3.030(1)(C)1.B.

C. Tremie pressure method pursuant to 10 CSR 23-3.030(1)(C)1.C.

D. Pressure method pursuant to 10 CSR 23-3.030(1)(C)1.D.

2. Grout materials.

A. Cement slurry.

B. Non-slurry bentonite.

C. Other grout types may be used upon receiving prior written approval from the department.

(E) Gravel Pack. All gravel placed into the well shall be clean, washed, and disinfected prior to placement or provisions made for disinfection in place.

(F) Wellhead Completion. Follow well casing seal and connection installation pursuant to 10 CSR 23-3.050(6).

(G) Major water users are subject to requirements pursuant to section 256.410, RSMo.

(5) Oil and gas zones.

(A) Report oil or gas encounters and the conversion of water wells to oil or gas wells pursuant to section 256.614, RSMo.

(B) Any water well that encounters oil and/or gas shall have an annular or open hole grout plug from fifty feet (50') below the oil and/or gas bearing zone to fifty feet (50') above the oil and/or gas bearing zone.

(C) The grout plug shall be composed of cement slurry with a two to six percent (2–6%) bentonite additive.

(D) The grout plug shall be placed via one (1) of the tremie methods.

AUTHORITY: sections 256.606, 256.614, 256.615, and 256.626, RSMo [1994] 2016. Original rule filed April 2, 1987, effective July 27, 1987. For intervening history, please consult the *Code of State Regulations*. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—Division of Geology and Land Survey
Chapter 3—Well Construction Code**

PROPOSED RESCISSION

10 CSR 23-3.040 Well Casing Seals and Connections. This rule described the types of well casing seals and connections used in well construction.

PURPOSE: This rule is being rescinded as the substantive requirements for well casing seals and connections are being consolidated into 10 CSR 23-3.050 Pump Installation and Wellhead Completion because the well casing seals and connections generally are installed when the pump is installed.

AUTHORITY: sections 256.606 and 256.626, RSMo Supp. 1991. Original rule filed April 2, 1987, effective July 27, 1987. Emergency amendment filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Amended: Filed Aug. 17, 1993, effective March 10, 1994. Rescinded: Filed June 27, 2018.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: The proposed rescission will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rescission with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—[Division of Geology and Land Survey]
Well Installation
Chapter 3—Water Well Construction Code**

PROPOSED AMENDMENT

10 CSR 23-3.050 Pump Installation and Wellhead Completion. The board is amending the division name, chapter name, rule title, rule purpose, sections (1), (4), (5), (6), and (7), replacing section (2) with section (3), renumbering as needed and removing Table 1.

PURPOSE: This amendment incorporates 10 CSR 23-3.040 Well Casing Seals and Connections and 10 CSR 23-3.050 Pump Installation into a single rule to address both requirements because the work usually is performed at the same time. This amendment cleans up redundant and outdated language and clarifies the regulations.

PURPOSE: This rule sets specific standards as to the proper procedures for the installation of pumps [for wells], plumbing, and completion of the wellhead.

(1) Pumps and Pumping Equipment.

(A) All wells shall have a pump installed that is either surface mounted or submersible.

[(A)](B) Install [A/a pump [shall be constructed] so that no unprotected openings into the [interior of the pump or] well casing exist. A hand pump, hand pump head, stand or similar device shall have a closed spout directed downward and a pump rod that operates through a stuffing box. A power driven pump shall be attached to the casing or approved suction or discharge line by a watertight connection[, including flange connections, hose clamp-type connections or other flexible couplings].

[(B) Priming Requirements. A pump shall be designed, installed and maintained so that priming is not required for ordinary use. Pumps installed for use only on a well water irrigation system are exempted but priming water shall be clear water, free of contamination and carrying a chlorine residual. An irrigation well equipped with a centrifugal pump may be primed without chlorination when the pump is filled with water taken directly from the well.]

(C) Backflow Prevention [for Chemical Injection Systems on Irrigation Wells. A chemical injection system may not be connected to a well used for human consumption].

1. A backflow prevention device shall be installed on all wells where agricultural chemical injection or other pressurized contaminant sources are used.

[1.]2. [Where a chemical injection system is connected directly to a well used for irrigation and which is not used as a potable water supply, a single] A double check-spring loaded backflow prevention device shall be installed between the point of chemical injection [on the pump discharge piping] and the water well in accordance with the manufacturer's instructions and [shall] have the following:

A. [Valving] A valve so that water can be drained from the system to prevent freezing;

B. A vacuum relief valve to prevent back-siphoning of chemicals into the well;

C. An automatic low pressure drain at least three-quarters inch (3/4") in diameter[, positioned so that when draining occurs liquid will run away from the well. The automatic low pressure drain shall quickly] that drains the check valve body of water when operation of the [irrigation] pump is discontinued;

D. A watertight seal around the check valve;

E. An inspection port at least four inches (4") in diameter to allow inspections of the inside of the check valve; and

F. [The] A check valve [shall] able to withstand a minimum

hydraulic pressure of one hundred fifty (150) pounds per square inch (psi) without leaking[. Valve shall be galvanized, epoxy coated or similar material that] and resist/s/ant to corrosion.

[(2.)3. The [irrigation] well pump and the chemical injection pump shall be electrically or mechanically connected so that when the well pump stops, the chemical pump will shut off automatically.

[(D) Temporary Pump Removal. If the pump is removed temporarily from the well for any reason, the well shall be capped with a watertight seal strong enough to prevent entry of contamination or foreign objects.

(E) Pump Bearing Lubrication. Lubrication of bearings of power driven pumps shall be with water or oil which will not adversely affect the groundwater.

1. Water lubrication. If a storage tank is required for lubrication water, it shall be designed to protect the water from contamination.

2. Oil lubrication. The reservoir shall be designed to protect the oil from contamination with a shutoff valve to stop oil flow when not pumping.]

[(F)](D) Electrical. [Installation. All electrical installations shall be performed and maintained in accordance with the existing electric codes. A permitted well installation contractor or pump installation contractor must perform all electric wiring which impacts the operation of the pump or pumping system. This includes wiring from the pump to the control boxes to the main power supply such as the breaker box in a house. The electric wire must never be run through the pitless adaptor.]

1. A permitted pump installation contractor shall perform all electrical wiring that impacts the operation of the pump or pressure system to the point of entry. Any person may perform electrical wiring on high yield wells.

2. The electric wire shall not be installed through the pitless connection and be grounded.

[(G)](E) [All p]lumbing. [or water supply distribution from the well to the point of entry hookup shall be installed and maintained in accordance with existing plumbing codes.] A permitted [well installation contractor or] pump installation contractor, except as exempted in section 256.607.2, RSMo, must perform all plumbing which impacts the distribution of water from its source, through the pressure system to the point of entry [inside or outside of the structure or building being served]. This includes, but is not limited to, pressure tanks, water treatment equipment and any other materials needed to complete the initial installation of the water system, inside and outside of the structure[, except as exempted in section 256.607, RSMo].

[(2) Operational domestic and multifamily wells must have a pump, either surface mounted or submersible. Wells must have a watertight seal at the top of the well to prevent contamination from entering the well from the top. Water may not be withdrawn from a drilled well by use of a well bucket that is lowered down the well for the purpose of retrieving water for human consumption or for nonhuman uses.]

[(3)](2) Water [S]uction [L]ines[. A water suction line] for surface pumps shall be constructed of galvanized iron [or], steel, [cast iron or] plastic [pipe as approved by the division or other material given approval by the division. Aluminum pipe is acceptable for well water irrigation systems in addition to the previously mentioned materials. When connecting metallic pipes or casing of dissimilar types, care must be taken so that electrolysis does not occur. If the pump is located next to the well with the pump suction line emerging from the top of the well], or aluminum. Other materials may be used provided advanced written approval is obtained from the department. [a]A well seal or equivalent shall be installed between the well casing and suction pipe [to provide a] that is watertight [closure].

(3) Frost proof yard hydrants shall not be installed directly on the wellhead and be securely anchored.

(4) Pump Discharge Lines.

(A) A buried discharge line [between] from the well [casing and] to the pressure tank [in any installation, including a deep well turbine or a submersible pump,] shall not be under negative pressure [at any time] during normal operation. [If a check valve is installed in a buried water line between the well casing and the pressure tank, the water line between the well casing and the check valve shall meet the requirements for a suction line unless equipped with an air release valve.]

(B) Pump discharge ports on [irrigation] high yield wells shall be covered when not in use.

(5) Drop [P]ipe[. The pipe used to hang the pump in a well must be composed of thermoplastic acrylonitrile-butadiene-styrene (ABS) or polyvinyl chloride (PVC) materials that have Schedule 80 (SCH 80) or thicker walls or if metallic drop pipe is used, a wall thickness of at least Schedule 40 (SCH 40) is required.] shall be rigid, of sufficient strength to support the weight and torque of the pump, be able to withstand the operating water pressure, be impact and abrasion resistant, and not impart contaminants into the groundwater.

(6) [Vents. All wells shall be vented with watertight caps terminating at least two feet (2') above the regional flood level (see 10 CSR 23-3.010(1)(A)6. for exception) or one foot (1') above the finished grade surface or the floor of a pump room, well room, whichever is higher. The casing vent shall be a minimum one-half inch (1/2") in diameter, screened and point downward. Vents may be offset provided they meet the provisions of this section. Any submersible pump shall be installed with a vented cap on the top of the well casing to prevent drawing near surface contamination into the well. When a well with a submersible pump kicks on and pumps water from the well, the drawdown of the water in the well creates a vacuum pulling air into the well. If the well is not vented properly, air will be pulled from around the drop pipe, through the electric wire hole, from around the well seal, and the like. If a well is not vented properly, it could be contaminating itself every time the pump kicks on by pulling near surface contaminants into the well.] Wellhead Completion.

(A) Above-ground connections shall—

1. Be a minimum of twelve inches (12") above ground surface or well house floor;

2. Have watertight piping and electrical connections that are mechanical or welded and sealed;

3. Have a protective well cap that seals tightly against the casing and has a screened vent or a casing seal that has a new rubber gasket. Cutting the rubber well seal for installation is not allowed;

4. When used, have surface driven pumps extending at least one inch (1") into the base of the motor;

5. Be provided with a minimum of one-half inch (1/2") diameter screened vent pointed downward;

6. Hubcap type well caps are not approved for permanent use; and

7. Temporary caps shall be used until a permanent cap or well seal is installed.

(B) Below-ground connections shall—

1. Use a pitless adaptor or pitless unit of sufficient strength to withstand normal operating stress;

2. Construct the hole cut in the casing for the installation of the pitless adaptor/unit to ensure a watertight seal with the pitless adaptor/unit in place;

3. Use a protective well cap that seals tightly against the casing and has a screened vent; and

4. Have native or grout material packed tightly around the casing and discharge pipe after installation.

(7) Disinfection.

(A) *[A] The permittee shall be responsible for disinfecting a new, repaired, or [reconditioned] reconstructed well or pump installation [shall be thoroughly pumped to waste until the water is as clear as is reasonably possible, dependent upon groundwater conditions in the area] or replacement.*

(B) *[After that t/The well, pressure tank, and pumping equipment shall be disinfected with chlorine [so applied that] to achieve a concentration of at least one hundred (100) parts per million (ppm) of chlorine [shall be obtained in all parts of the well and plumbing system. The chlorine solution shall be introduced into the well in a manner to flush the well surfaces above the static water level with chlorine solution].*

(C) *[A] The minimum contact period [of two (2) hours (overnight is better) shall be provided] before pumping the well to waste and flushing the chlorine solution from the distribution system is two (2) hours. [The well owner shall be instructed by the permittee concerning these procedures and can be responsible for pumping and flushing of the well following disinfection. A permittee shall be responsible for disinfecting the work performed on the well, pump or pumping equipment. Disinfection in a well repair operation may be accomplished at the beginning of the operation with chlorine applied to obtain a concentration of two hundred (200) ppm for the period of the well repair operation. The water shall be pumped to waste prior to the taking of water samples or use being made of the water. Caution: The chlorinated water must not leave the owner's property. If it does, the owner must report to the Water Pollution Control Program, Division of Environmental Quality.]*

[(B) Special care must be exercised when replacing a pump because bacteria can easily contaminate what is pulled from the well (pump, drop pipe, electric wire) and it is difficult to disinfect the portions of the electric wire and drop pipe that are above water level. When pulling a pump, the electric wire should not be allowed to touch the ground. This may be accomplished by laying plastic on the ground or utilizing a mechanical system that winds up the electric wire as it is withdrawn from the well or other appropriate means. The drop pipe should be placed on pipe racks or other precautions should be taken to keep it from contacting the ground. If contamination does occur, special care must be taken to disinfect the contaminated areas.

(C) The following table will help in determining how much chlorine to add during disinfection of the well. First you will need to determine height of the water column in the well.

1. Formula to find height of water column: (total depth of well) minus (static water level) equals (height of water column). Example: (216 ft. well depth) - (37 ft. water level) = (179 ft. of water column). Then using the table find the casing size of the well, read across to the corresponding chlorine product column and use these amounts in the following formula:

2. Formula to find amount of chlorine product needed to disinfect well: (height of water column) times (amount of product from table) equals (amount of product needed to disinfect well) Example: For a six inch (6") casing using 5.25% Clorox product: (179 ft.) × (0.381) = 68 oz. or about one-half (1/2) gallon.

Table 1

Disinfection Table
(Produces a 100 mg/liter chlorine solution per-foot of casing size)

Casing Size Nominal Diameter (Inches)	Gallons of Water Per One Foot Of Casing Size (Gal/Ft/Case Size)	Ounces of Product Added To Disinfect One (1) Foot of Water Per Casing Size		
		5.25% to 6.0% Chlorine PRODUCT: Clorox, Purex, Sno-White Kandu, Topco, Action, White Magic, Surefine and MC ₂ or other brand names (sodium hypochlorite) (Fluid Ounces)	10% Chlorine PRODUCT: Liquid Bleach. Purchased from a chemical supply company (sodium hypochlorite) (Fluid Ounces)	70% Chlorine PRODUCT: High- Test Calcium Hypochlorite. Purchased from a chemical company (calcium hypochlorite) (Dry Ounces)
1.25	0.06	0.015	0.008	0.0011
1.50	0.09	0.023	0.012	0.0017
2	0.16	0.041	0.021	0.0031
2.5	0.25	0.064	0.033	0.0048
3	0.37	0.094	0.049	0.0071
3.5	0.50	0.127	0.067	0.0095
4	0.65	0.165	0.087	0.0124
5	1.02	0.259	0.136	0.0194
6	1.50	0.381	0.200	0.0286
8	2.60	0.660	0.347	0.0495
10	4.08	1.036	0.544	0.0777
12	5.87	1.490	0.782	0.1118
14	8.00	2.031	1.066	0.1523
16	10.44	2.650	1.391	0.1988
18	13.21	3.354	1.761	0.2515
24	23.50	5.966	3.132	0.4474
30	36.70	9.317	4.891	0.6988

(D) When placing the chlorine into the well it must be thoroughly mixed with the existing water to disperse the chlorine throughout the water column. This is best done by batch dumping large volumes of chlorinated water into the well or by placing chlorine tablets in a porous bag and lowering it and raising it within the entire water column until the chlorine is dissolved.

(E) A practical alternative is to divide the amount of needed chlorine product calculated using the Disinfection Table into liquid and tablet form. Then—

1. Pour the tablets into the well which will dissolve near the bottom of the well;

2. Pour liquid chlorine product into the well being sure to wash down all surfaces that are above the static water level;

3. Circulate water into the house by running cold water until chlorine smell is detected, turning off cold, then running hot until chlorine smell is detected, in each faucet in the house. Proper ventilation must be maintained during this step and step 5 (see paragraph (7)(E)5.) to avoid overpowering potentially toxic chlorine fumes;

4. Stop circulating water and let set at least two (2) hours (preferably overnight); and

5. Flush system by running water until no chlorine odor is detected.]

(D) When pulling a pump the electrical wire and drop pipe shall not touch the ground. If contamination occurs, disinfect all items prior to reinstallation.

(E) A discharge of chlorinated water to waters of the state shall

be reported to the department.

AUTHORITY: sections 256.606 and 256.626, RSMo [1994] 2016. Original rule filed April 2, 1987, effective July 27, 1987. Amended: Filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed Nov. 1, 1995, effective June 30, 1996. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

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“The welfare of the people shall be the supreme law.”



JOHN R. ASHCROFT
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IN THIS ISSUE:

PART I

EMERGENCY RULES

Department of Social Services

MO HealthNet Division1991

EXECUTIVE ORDERS1996

PROPOSED RULES

Department of Agriculture

Weights, Measures and Consumer Protection1998

Department of Elementary and Secondary Education

Division of Learning Services2013

Department of Higher Education

Commissioner of Higher Education2020

Department of Labor and Industrial Relations

Division of Labor Standards2021

Department of Natural Resources

Director's Office2039

Air Conservation Commission2039

Dam and Reservoir Safety Council2161

Well Installation2170

PART II

Well Installation2213

Petroleum and Hazardous Substance Storage Tanks2263

Oil and Gas Council2265

Solid Waste Management2280

State Environmental Improvement and Energy Resources

Authority2308

Department of Social Services

MO HealthNet Division2311

Department of Insurance, Financial Institutions

and Professional Registration

State Board of Nursing2319

ORDERS OF RULEMAKING

Department of Agriculture

Market Development2331

Department of Natural Resources

Air Conservation Commission2332

Clean Water Commission2335

Safe Drinking Water Commission2337

Petroleum Storage Tank Insurance Fund Board of

Trustees2338

Department of Public Safety

Peace Officer Standards and Training Program2341

Department of Insurance, Financial Institutions

and Professional Registration

Board of Cosmetology and Barber Examiners2342

Real Estate Appraisers2342

Missouri Board for Respiratory Care2342

Office of Tattooing, Body Piercing, and Branding2343

IN ADDITIONS

Department of Agriculture

Weights, Measures and Consumer Protection2344

Department of Conservation

Conservation Commission2344

CONSTRUCTION TRANSIENT LIST2345

DISSOLUTIONS2405

SOURCE GUIDES

RULE CHANGES SINCE UPDATE2410

EMERGENCY RULES IN EFFECT2429

EXECUTIVE ORDERS2430

REGISTER INDEX2432

Register Filing Deadlines	Register Publication Date	Code Publication Date	Code Effective Date
April 2, 2018	May 1, 2018	May 31, 2018	June 30, 2018
April 16, 2018	May 15, 2018	May 31, 2018	June 30, 2018
May 1, 2018	June 1, 2018	June 30, 2018	July 30, 2018
May 15, 2018	June 15, 2018	June 30, 2018	July 30, 2018
June 1, 2018	July 2, 2018	July 31, 2018	August 30, 2018
June 15, 2018	July 16, 2018	July 31, 2018	August 30, 2018
July 2, 2018	August 1, 2018	August 31, 2018	September 30, 2018
July 16, 2018	August 15, 2018	August 31, 2018	September 30, 2018
August 1, 2018	September 4, 2018	September 30, 2018	October 30, 2018
August 15, 2018	September 17, 2018	September 30, 2018	October 30, 2018
September 4, 2018	October 1, 2018	October 31, 2018	November 30, 2018
September 17, 2018	October 15, 2018	October 31, 2018	November 30, 2018

Documents will be accepted for filing on all regular workdays from 8:00 a.m. until 5:00 p.m. We encourage early filings to facilitate the timely publication of the *Missouri Register*. Orders of Rulemaking appearing in the *Missouri Register* will be published in the *Code of State Regulations* and become effective as listed in the chart above. Advance notice of large volume filings will facilitate their timely publication. We reserve the right to change the schedule due to special circumstances. Please check the latest publication to verify that no changes have been made in this schedule. To review the entire year's schedule, please check out the website at www.sos.mo.gov/adrules/pubsched.

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RULES

The rules are codified in the *Code of State Regulations* in this system–

Title		Division	Chapter	Rule
3	CSR	10-	4	.115
Department	<i>Code of State Regulations</i>	Agency Division	General area regulated	Specific area regulated

and should be cited in this manner: 3 CSR 10-4.115.

Each department of state government is assigned a title. Each agency or division in the department is assigned a division number. The agency then groups its rules into general subject matter areas called chapters and specific areas called rules. Within a rule, the first breakdown is called a section and is designated as (1). Subsection is (A) with further breakdown into paragraphs 1., subparagraphs A., parts (I), subparts (a), items I. and subitems a.

The rule is properly cited by using the full citation, for example, 3 CSR 10-4.115 NOT Rule 10-4.115.

Citations of RSMo are to the *Missouri Revised Statutes* as of the date indicated.

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Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—Division of Geology and Land Survey
Chapter 3—Well Construction Code

PROPOSED RESCISSION

10 CSR 23-3.060 Certification and Registration Reports. This rule set required standards for certification and registration report form record submittal.

PURPOSE: This rule is being rescinded and substantive information is being incorporated into a single new proposed rule 10 CSR 23-2.020 Certification and Registration.

AUTHORITY: sections 256.606, 256.614, 256.623 and 256.626, RSMo 2000. Original rule filed April 2, 1987, effective July 27, 1987. For intervening history, please consult the *Code of State Regulations*. Rescinded: Filed June 27, 2018.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: The proposed rescission will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rescission with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, 111 Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, 111 Fairgrounds Road, Rolla, MO 65401.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—Division of Geology and Land Survey
Chapter 3—Well Construction Code

PROPOSED RESCISSION

10 CSR 23-3.070 Plastic Well Casing. This rule designated special standards for the use of plastic casing in construction of a water well.

PURPOSE: This rule is being rescinded and the substantive requirements for plastic well casing are being consolidated into 10 CSR 23-3.030 Standards for Construction of Water Wells.

AUTHORITY: sections 256.606, 256.614, 256.615 and 256.626, RSMo 1994. Original rule filed April 2, 1987, effective July 27, 1987. For intervening history, please consult the *Code of State Regulations*. Rescinded: Filed June 27, 2018.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

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Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—[Division of Geology and Land Survey]
Well Installation
Chapter 3—Water Well Construction Code

PROPOSED AMENDMENT

10 CSR 23-3.080 Liners. The board is amending the division name, chapter name, rule purpose, sections (1)–(5), adding Table 3.8 and 3.9, and removing Table 5 and Table 6.

PURPOSE: This amendment clarifies the three (3) types of situations where a liner may be used and provides a clear method for each scenario.

PURPOSE: This rule sets guidelines for the use of liners in water wells [in Missouri].

[(1) Use of Liners. Liners are generally used for three (3) purposes. They are used to—

(A) Hold the well bore open when caving or spalling rock is encountered. These liners are usually slotted to allow water to enter the well from the aquifer; or

(B) Seal out problem areas below the existing casing or to correct inadequate grouting seals of the casing annulus and other problems arising concerning contamination of subsurface waters. Plastic liners may be used effectively to solve iron bacteria problems on steel casings. If a plastic liner is installed to seal out an iron bacteria problem, it must extend from the bottom of the steel casing and must have its upper end no deeper than ten feet (10') below the top of the well casing. The liner must also be grouted as stated in subsection (3)(B) of this rule; or

(C) If the liner is just used to solve a rust problem in the casing, a packer must be placed within five feet (5') of the bottom of the rusted casing interval. The liner must extend from the bottom of the steel casing to a point less than 10 feet (10') from the surface. The packer must be inside the casing and no grout is required.

(2) General Specifications and Guidelines.

(A) Liners may be composed of either steel or thermoplastic.

1. Steel liners must be new and have an inside diameter at least four inches (4") and have a minimum wall thickness not less than .188 inches.

2. Plastic liners must meet American Society for Testing and Materials (ASTM) standards concerning thermoplastic well casing and be composed of polyvinyl (PVC) or acrylonitrile-butadiene-styrene (ABS) materials formulated for well casing.

A. The inside diameter must not be smaller than four inches (4").

B. The Standard Dimension Ratio (SDR) ratings allowable for liner is SDR 26, SDR 21, SDR 17 and SDR 13.5. Schedule ratings allowable are SCH 40 and SCH 80.

(B) All liners used to seal out potential groundwater contamination areas below the existing casing or to correct inadequate grouting seals of the casing annulus, and other problems arising concerning the contamination of subsurface water must have their upper end set no deeper than ten

feet (10') below the top of the well casing. The liner must be secured in the hole.

(C) Packers shall be secured on plastic liners with screws (making sure they do not penetrate the liner) or other methods and on steel liners the packer shall be welded or mechanically attached so that it will not move during liner placement. Packers are not required on liners used only to hold open the well bore.

(D) Whenever a liner is needed it is recommended that the bottom of the liner be at the bottom of the well. This will help prevent potential future problems with pump replacement.

(3) Method of Installation.

(A) When liners are used only to hold open the well bore they may be placed in the well following normal industry installation procedures.

(B) All other liners must be sealed into place following these procedures:

1. The liner must have a rubber packer (first packer) secured near the bottom of the interval to be grouted. Another rubber packer (the second packer) must be secured about twenty feet (20') above the first packer. This will result in two (2) rubber packers spaced about twenty feet (20') apart on the liner. These packers must hold the grout in place. Grout must be placed between the first and second packer and completely fill this interval as the liner is being installed into the casing. Grout must also be placed on top of the second packer filling it to at least a point twenty feet (20') above the third packer. Care must be taken by the well installation contractor when selecting the type of grout used, keeping in mind the time of liner installation and grout set-up time. The liner shall be placed into the well casing being careful not to damage the packers or liner, or two (2) packers must be placed close together near the bottom of the liner and grouted after the liner is set by pressure grouting through a tremie pipe. The bottom sixty feet (60') of annulus created when installing a four and one-half-inch (4 1/2") or five-inch (5") outside diameter liner must be grouted. If a liner must be grouted, a minimum annulus of one-half inch (1/2") must be present. Tables 5 and 6 state the required amount of grout to fill the annulus sixty feet (60'); or

2. Alternate grouting procedures will be considered on a case-by-case basis. Written approval in advance by the division is required.

(4) *Permittee Responsibility to Seal Liner.* In wells that have a liner used for any purpose, other than holding the well bore open, it is the responsibility of the permittee to ensure that the annulus between the well bore and the liner is sealed.

(5) PVC and ABS liners may never be used when known gasoline or solvent contamination exists within one hundred (100) yards of the well being repaired or drilled. When gasoline or solvent contamination levels do not present a potential threat to the integrity of the pipe or liner, the use of PVC or ABS pipe material will be considered on a case-by-case basis. Approval must be received in advance.

TABLE 5

*Number of Bags for Minimum Amount of Required Grout for
Lining Water Wells*

Outer Diameter of Plastic Liner: 4 1/2 inches—Minimum Length of Grout: 60 feet

<i>Borehole Diameter</i>	<i>6</i> <i>*Ann.^O.H.</i>	<i>8</i> <i>*Ann.^O.H.</i>	<i>10</i> <i>*Ann.^O.H.</i>
<i>Type of Grout</i>			
CEMENT			
Portland Type I	5 11	13 19	24 30
Portland Type III	5 11	13 19	24 30
BENTONITE			
<i>Pellets—</i>			
1/2" Baroid Pellets	7 16	19 29	36 45
3/8" Baroid Pellets	7 17	21 30	37 47
1/4" Baroid Pellets	7 17	17 20	37 47
Wyo-bend Tablets	8 17	22 32	39 49
Volclay 1/2"	8 18	22 32	40 50
Volclay 3/8"	8 19	23 33	41 52
Volclay 1/4"	8 19	23 34	42 53
<i>Chips—</i>			
Baroid HolePlug	7 17	21 30	38 47
Wyo-bend Coarse	6 14	17 25	32 40
Wyo-bend Medium	6 15	18 26	33 41
Volclay Coarse	7 16	19 28	35 44
Volclay Medium	7 16	20 29	36 45
<i>Granular—</i>			
Benseal	6 15	18 26	33 41
Wyo-bend No. 8	6 14	17 25	32 40
Wyo-bend No. 16	6 14	17 25	32 40
<i>Slurry—</i>			
Baroid	2 3	4 6	8 10
Wyo-bend	2 4	4 7	8 10
Volclay	1 3	4 6	7 9

*Ann. = Bags needed to fill Annular Space

^O.H. = Bags needed to fill the Open Bore Hole

TABLE 6

Number of Bags for Minimum Amount of Required Grout for
Lining Water Wells

Outer Diameter of Plastic Liner: 5 inches—Minimum Length of Grout: 60 feet

Borehole Diameter	6 *Ann.^O.H.	8 *Ann.^O.H.	10 *Ann.^O.H.
Type of Grout			
CEMENT			
Portland Type I	3 11	12 19	23 30
Portland Type III	3 11	12 19	23 30
BENTONITE			
Pellets—			
1/2" Baroid Pellets	5 16	18 29	34 45
3/8" Baroid Pellets	5 17	19 30	35 47
1/4" Baroid Pellets	5 17	18 30	35 47
Wyo-bend Tablets	6 18	19 32	37 49
Volclay 1/2"	6 18	20 32	38 50
Volclay 3/8"	6 19	20 33	39 52
Volclay 1/4"	6 19	21 34	40 53
Chips—			
Baroid HolePlug	5 17	19 30	36 47
Wyo-bend Coarse	5 14	16 25	30 40
Wyo-bend Medium	5 15	16 26	31 41
Volclay Coarse	5 16	17 28	33 44
Volclay Medium	5 16	18 29	34 45
Granular—			
Benseal	5 15	16 26	31 41
Wyo-bend No. 8	5 14	16 25	30 40
Wyo-bend No. 16	5 14	16 25	30 40
Slurry—			
Baroid	1 3	4 6	7 10
Wyo-bend	1 4	4 7	8 10
Volclay	1 3	4 6	7 9

*Ann. = Bags needed to fill Annular Space

^O.H. = Bags needed to fill the Open Bore Hole]

(1) General specifications. All liners shall—

(A) Be new and follow minimum specifications in Table 3.8. Used pipe is considered new if it is salvaged within ninety (90) days of the installation of a new water well and is decontaminated.

Table 3.8 Minimum liner specifications.

Material	Wall thickness (inches)	Standard Dimension Ratio (SDR)	Schedule (SCH)
Steel	0.188	-	-
Plastic (PVC or ABS only) ¹	-	26	40

¹ Shall meet ASTM standards;

(B) Be suspended securely with a hanger or allowed to rest on bottom of the well;

(C) Be installed so that the top of the liner terminates within ten feet (10') of the top of the casing; and

(D) Be able to withstand forces encountered during installation.

(2) Packers or liner hangers when used shall be secured—

(A) For plastic liners, with screws that do not penetrate the inside of the liner; or

(B) For steel liners, with liner hangers welded or mechanically attached.

(3) Liners are used for three (3) general purposes. The following additional requirements apply based on the purpose of the liner:

(A) To hold the well bore open for any potential collapse or sloughing of loose material—

1. Grout material and packers are optional; and

2. Manufactured slotted liner, pipe-based screens, wire-wrapped liners, or manually perforated liners may be used;

(B) To prevent rust—

1. The liner shall extend from at least five feet (5') below the bottom of the casing to within ten feet (10') of the top of the casing; and

2. Shall have two (2) packers, with the first packer set within five feet (5') below the bottom of the casing and the second packer set inside the casing near the bottom; and

3. Grout material is optional; and

(C) To seal out undesirable conditions or to correct inadequate casing seals—

1. Have a minimum annular space of one-half inch (1/2"); and

2. Have a minimum of two (2) rubber packers secured below the bottom of the area of concern to be grouted; and

3. Have packers placed a maximum of ten feet (10') apart; and

4. Use one (1) of the following grout materials:

A. Cement slurry; or

B. Coated bentonite pellets; or

C. Other grout materials upon receiving advanced written approval by the department; and

5. Use one (1) of the following grout methods:

A. Gravity; or

B. Tremie; or

C. Other methods upon receiving advanced written approval by the department; and

6. Have a minimum thirty-foot (30') annular seal placed above the packers using specifications provided in Table 3.9; and

7. Have the top of the liner extend to within ten feet (10') of the top of casing; and

8. When used to correct inadequate casing seals, place the top packer twenty five feet (25') below the bottom of the casing. Emplace grout material from above the top packer to a minimum of five feet (5') into the casing for a total of thirty feet (30') of grout.

Table 3.9 Minimum number of bags of grout to achieve an annular grout seal of thirty feet (30') for lining water wells.

Type of Grout	Borehole Diameter (inches)					
	6	8	10	6	8	10
	Outer Diameter of Liner (inches)					
	4½"			5"		
CEMENT						
Portland Type I	2.2	6.1	11.2	1.5	5.5	10.5
Portland Type II	2.2	6.1	11.2	1.5	5.5	10.5
BENTONITE						
Pellets						
½ " Baroid Pellets	3.5	9.7	17.8	2.5	8.7	16.7
¾" Baroid Pellets	3.7	10.3	18.7	2.6	9.2	17.6
¼ " Baroid Pellets	3.7	10.2	18.6	2.6	9.1	17.5
Wyo-bend Tablets	3.9	10.8	19.7	2.7	9.6	18.5
Volclay ½"	3.9	10.9	19.9	2.7	9.7	18.7
Volclay ¾"	4.1	11.3	20.6	2.8	10.1	19.3
Volclay ¼"	4.2	11.6	21.2	2.9	10.4	20.0

(4) PVC or ABS liners are prohibited when known gasoline or solvent contamination exists within three hundred feet (300') of the well being repaired or drilled.

(5) It is the responsibility of the permittee to ensure the annulus between the borehole and liner is sealed for a period of three (3) years from the date the well construction or reconstruction is approved by the department, unless it can be proven that the annular seal has been damaged by another person. This applies to wells where the liner is installed to seal out undesirable conditions, correct inadequate grout seals of the casing annulus, and/or any other issue associated with the well casing.

AUTHORITY: sections 256.606 and 256.626, RSMo [1994] 2016. Original rule filed April 2, 1987, effective July 27, 1987. For intervening history, please consult the Code of State Regulations. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—[Division of Geology and Land Survey]
Well Installation
Chapter 3—Water Well Construction Code

PROPOSED AMENDMENT

10 CSR 23-3.090 [Regionalization] Drilling Areas. The board is amending the division name, chapter name, rule name, rule purpose, editor's note, and sections (1)–(6), and adding sections (7)–(13). The board is also adding Tables 3.10 through 3.15, Figures 3.1 through

3.10 and removing Figures 1 through 6. Note: Figures 7, 7A, 7B, 7C, 7D, and Figure 8 are also being removed (these were referenced in 10 CSR 23-3.100 Sensitive Areas which is being rescinded).

PURPOSE: This amendment incorporates substantive requirements from 10 CSR 23-3.100 Sensitive Areas and renames the rule to include all drilling areas. This amendment also rennumbers drilling areas sequentially.

PURPOSE: This rule sets [specific additional] construction standards [for certain regions in Missouri.] in addition to 10 CSR 23-3.030 Standards for Construction of Water Wells. These additional standards apply to domestic and multifamily wells and vary by geographic area based on geologic, hydrologic, and/or environmental factors (see Figure 3.1).

[Editor's Note: Area maps mentioned in this rule may be found following 10 CSR 23-3.110.]

(1) Area 1. [All persons engaged in drilling domestic wells in Area 1, a limestone or dolomite area (Figure 1 and 8) shall—] This area encompasses portions of southwestern, central, east central, and southeastern Missouri (see Figure 3.2).

(A) [Set no less than eighty feet (80') of casing, extending not less than thirty feet (30') into bedrock. Example: if sixty feet (60') of residual (weathered rock) material is encountered in drilling before bedrock, then ninety feet (90') of casing must be set.] **Bedrock wells.**

1. A minimum of eighty feet (80') of casing shall be installed and extend a minimum of thirty feet (30') into solid bedrock. Example: if sixty feet (60') of residual material or broken rock is encountered during drilling above solid bedrock, then ninety feet (90') of casing will be installed.

[(B)]2. [Construct t]The [drill] borehole for a domestic well shall be a minimum of eight and five-eighths inches (8 5/8") in diameter to the [surface] casing [point] depth.

[(C)]3. Install new[, steel or plastic] casing [as specified in] pursuant to 10 CSR 23-3.030(1)(A) [(steel) or 10 CSR 23-3.070 (plastic)].

[(D)]4. [Install and seal casing as follows:] **Grouting Requirements.**

[1.]A. [Full-length grout is preferred and will ensure a better annular seal but sealing t] The lowermost thirty feet (30') of casing [using approved grout material and procedures set out in 10 CSR 23-3.030 is required. Drill cuttings and a drive shoe or drill cuttings used by themselves are not approved grout materials. Drill cuttings may be placed above the grouted

interval to fill in the annular space—] shall be grouted. Table 3.10 lists the minimum amount of grout required by type and size of annulus or open hole.

[A. If steel casing is used, a drive shoe is required except on wells where the grout is allowed to cure before drilling resumes;

B. If plastic casing is used, a packer, coupling or inverted bell is required to be secured near the bottom of the casing and must hold the grout in place while drilling continues. No packer, coupling or inverted bell is required if grout is allowed to cure before drilling resumes;

C. The following times must be followed for curing grout when no packer is used:

(I) Hi-early cement—minimum set time of twelve (12) hours.

(II) Portland Type I cement—minimum set time of seventy-two (72) hours;

(III) Chipped bentonite—minimum hydration time of four (4) hours; and

(IV) High solids bentonite slurry—varies based on additives and manufacturer's specifications;]

B. Grouting materials and methods shall be followed pursuant to 10 CSR 23-3.030(1)(C).

C. The annular space above the grouted interval shall be filled with clean fill.

[(E)](B) [If the well is to be drilled as an alluvial well—] Unconsolidated material wells.

1. [No less than] A minimum of twenty feet (20') of casing shall be [set] installed above the screened or perforated interval [of the well;].

2. [The drill hole shall be constructed a minimum of ten and five-eighths inches (10 5/8") in diameter being at least four inches (4") larger than the casing to be placed into it. Well casing must be at least six inch (6") nominal diameter. Graded, chlorinated gravel may be placed into the annular space adjacent to the well screen or natural gravels in the formation being drilled can be allowed to cave back against the screen;] The borehole for a domestic well shall be a minimum of ten and five-eighths inches (10 5/8") in diameter to the casing depth. The borehole shall be a minimum of four inches (4") larger in diameter than the casing being installed.

3. [Full-length grout is preferred (above the screened interval) and will ensure a better annular seal but sealing the upper twenty feet (20') of casing using approved grout materials and procedures set out in 10 CSR 23-3.030 is required.] Install new casing pursuant to 10 CSR 23-3.030(1)(A).

4. Grouting Requirements.

A. The upper twenty feet (20') of casing shall be grouted. Table 3.11 lists the minimum amount of grout required by type and size of annulus or open hole.

B. Grouting methods and materials shall be followed pursuant to 10 CSR 23-3.030(1)(C).

C. A chlorinated gravel pack may be placed into the annular space or native materials may be allowed to collapse against the well screen or perforated interval.

(2) Area 2. [All persons engaged in drilling domestic wells in Area 2, Central Western Missouri (Figure 2) shall—] This area encompasses west central Missouri and is delineated separately because the bedrock has the potential to produce groundwater with high dissolved solids compared to other areas of the state (see Figure 3.3).

(A) [Set no less than forty feet (40') of casing, extending not less than fifteen feet (15') into bedrock. Areas where Cherokee Group sediments are present; set casing through caving zones and into waterbearing sands. In some instances this might require several hundred feet of casing. Liners may be used with minimum amount of casing listed

for this area;] Bedrock wells.

1. A minimum of forty feet (40') of casing shall be installed and extend a minimum of fifteen feet (15') into solid bedrock.

[(B)]2. [Construct t/[The [drill] borehole for domestic wells shall be a minimum of eight and five-eighths inches (8 5/8") in diameter to the [surface] casing [point;] depth.

[(C)]3. Install new [steel or plastic] casing[s as specified in] pursuant to 10 CSR 23-3.030(1)(A) [(steel) or 10 CSR 23.3.070 (plastic)].

[(D) Install and seal casing as follows: Full-length grout is preferred and will ensure a better annular seal but sealing the lowermost thirty feet (30') of casing using approved grout materials and procedures set out in 10 CSR 23-3.030 is required. Drill cuttings and a drive shoe or drill cuttings used by themselves are not approved grout material. Drill cuttings may be placed above the grouted interval to fill in the annular space—

1. If steel casing is used, a drive shoe is required except on wells where the grout is allowed to cure before drilling resumes;

2. If plastic casing is used, a packer, coupling or inverted bell is required to be secured near the bottom of the casing and must hold the grout in place while drilling continues. No packer, coupling or inverted bell is required if grout is allowed to cure before drilling resumes;

3. The following times must be followed for curing grout when no packer is used:

A. Hi-early cement—minimum set time of twelve (12) hours;

B. Portland Type I cement—minimum set time of seventy-two (72) hours;

C. Chipped bentonite—minimum hydration time of four (4) hours; and

D. High solids bentonite slurry—varies based on additives and manufacturer's specifications;

(E) In areas where shale or shaley material is present above the waterbearing zones, casing or liner shall be set so as to exclude intervals which would cave into the drill hole or cause muddy water to be pumped;]

4. Grouting Requirements.

A. The lowermost thirty feet (30') of casing shall be grouted. Table 3.10 lists the minimum amount of grout required by type and size of annulus or open hole.

B. Grouting materials and methods shall be followed pursuant to 10 CSR 23-3.030(1)(C).

[(F)](B) [If the well is to be drilled as an alluvial well—] Unconsolidated material wells.

1. [No less than] A minimum of twenty feet (20') of casing shall be [set] installed above the screened or perforated interval [of the well;].

2. The [drill] borehole shall be [constructed] a minimum of ten and five-eighths inches (10 5/8") in diameter [being at least] to the casing depth. The borehole for domestic wells shall be a minimum of four inches (4") larger in diameter [than the casing to be placed into it]. [Well casing must be at least six-inch (6") nominal diameter. Graded, chlorinated gravel may be placed into the annular space adjacent to the well screen or natural gravels in the formation being drilled can be allowed to cave back against the screen; and

3. Full-length grout is preferred (above the screened interval) and will ensure a better annular seal but sealing the upper twenty feet (20') of casing using approved grout materials and procedures set out in 10 CSR 23-3.030 is required.

(G) Five-Inch (5") Casing Wells. A well may be completed using a five-inch (5") nominal casing if the following standards are met:

1. The casing must be set full length and be slotted

across the producing horizons.

2. The drill hole must be eight and five-eighths inches (8 5/8") in diameter with the upper forty feet (40') to be reamed out to ten and five-eighths inches (10 5/8") in diameter; and

3. The upper forty feet (40') of annular space must be grouted and the remainder of the borehole below the grout must be gravel packed.]

3. Install new casing pursuant to 10 CSR 23-3.030(1)(A).

4. Grouting Requirements.

A. The upper twenty feet (20') of casing shall be grouted. Table 3.11 lists the minimum amount of grout required by type and size of annulus or open hole.

B. Grouting materials and methods shall be followed pursuant to 10 CSR 23-3.030(1)(C).

C. A chlorinated gravel pack may be placed into the annular space or native materials may be allowed to collapse against the well screen or perforated interval.

(3) Area 3. [All persons engaged in drilling domestic wells in area 3, northwest Missouri area, (Figure 3) shall—] This area encompasses northwestern and north central Missouri and is delineated separately because glacial till overlies bedrock that has the potential to produce groundwater with high dissolved solids compared to other areas of the state (see Figure 3.4).

[(A) If the well is to be drilled as a glacial drift or alluvial well;

1. No less than twenty feet (20') of casing shall be set above the screened or perforated interval of the well;

2. The drill hole shall be constructed a minimum of ten and five-eighths inches (10 5/8") in diameter being at least four inches (4") larger in diameter than the casing to be placed into it. Well casing must be at least six-inch (6") nominal diameter. Graded, chlorinated gravel may be placed into the annular space adjacent to the well screen or natural (native) gravels in the formation being drilled can be allowed to cave back against the screen;

3. Full-length grout is preferred (above the screened interval) and will ensure a better annular seal but sealing the upper twenty feet (20') of casing using approved grout materials and procedures set out in 10 CSR 23-3.030 is required.

(B) If the well is to be drilled as a bedrock well—

1. Set no less than forty feet (40') of casing, extending not less than fifteen feet (15') into bedrock;

2. Construct the drill hole a minimum of eight and five-eighths inches (8 5/8") in diameter to the surface casing point;

3. Install new steel or plastic casing as specified in 10 CSR 23-3.030 (steel) or 10 CSR 23-3.070 (plastic); and

4. Install and seal casing as follows:

A. Full-length grout is preferred and will ensure a better annular seal, but sealing the lowermost thirty feet (30') of casing using approved grout materials and procedures set out in 10 CSR 23-3.030 is required. Drill cuttings and a drive shoe or drill cuttings used by themselves are not approved grout materials. Drill cuttings may be placed above grouted interval to fill in the annular space—

(I) If steel casing is used, a drive shoe is required except on wells where the grout is allowed to cure before drilling resumes;

(II) If plastic casing is used, a packer, coupling or inverted bell is required to be secured near the bottom of the casing and must hold the grout in place while drilling continues. No packer, coupling or inverted bell is required if grout is allowed to cure before drilling resumes;

(III) The following times must be followed for curing grout when no packer is used:

(a) Hi-early cement—minimum set time of twelve (12) hours;

(b) Portland Type I cement—minimum set time of seventy-two (72) hours;

(c) Chipped bentonite—minimum hydration time of four (4) hours; and

(d) High solids bentonite slurry—varies based on additives and manufacturer's specifications;]

(A) Bedrock wells.

1. A minimum of forty feet (40') of casing shall be installed and extend a minimum of fifteen feet (15') into solid bedrock.

2. Construct the borehole for domestic wells a minimum of eight and five-eighths inches (8 5/8") in diameter to casing depth.

3. Install new casing pursuant to 10 CSR 23-3.030(1)(A).

4. The casing shall be a minimum of five and one-half inches (5 1/2") in diameter and the borehole shall be a minimum of two inches (2") larger in diameter than the casing being installed.

5. Grouting Requirements

A. The lowermost thirty feet (30') of casing shall be grouted. Table 3.12 lists the minimum amount of grout required by type and size of annulus or open hole.

B. Grouting materials and methods shall be followed pursuant to 10 CSR 23-3.030(1)(C).

C. The annular space above the grouted interval shall be filled with clean fill.

[(C)]6. **Shallow Bedrock Well**—If usable [amounts] quantities of water are not expected to be available in deeper bedrock horizons [and water is only available from the upper, fractured and weathered portion of bedrock, and if the water is coming from a zone that is at least forty feet (40') deep, you must set a minimum of forty feet (40') of casing but only one foot (1') of this casing need be set into the bedrock. This allows the use of shallower water horizons under some circumstances; and] one (1) of the following construction methods may be used.

[(D) Five-Inch (5") Casing Wells. A well may be completed using a five-inch (5") nominal casing if the following standards are met:

1. The casing must be set full-length and be slotted across the producing horizons;

2. The drillhole must be eight and five-eighths inches (8 5/8") in diameter with the upper forty feet (40') to be reamed out to ten and five-eighths inches (10 5/8") in diameter; and

3. The upper forty feet (40') of annular space must be grouted and the remainder of the borehole below the grout must be gravel packed.]

A. Method 1.

(I) A minimum of forty feet (40') of casing shall be installed pursuant to 10 CSR 23-3.030(1)(A).

(II) A minimum of one foot (1') of casing shall extend into solid bedrock.

(III) The borehole for domestic wells shall be a minimum of eight and five eighths (8 5/8") in diameter to the casing depth.

(IV) The casing shall be a minimum of five and one-half inches (5 1/2") in diameter and the borehole shall be a minimum of two inches (2") larger in diameter than the casing being installed.

(V) The lower thirty feet (30') of casing shall be grouted. Table 3.12 lists the minimum amount of grout required by type and size of annulus or open hole.

(VI) Grouting materials and methods shall be followed pursuant to 10 CSR 23-3.030(1)(C).

(VII) The annular space above the grouted interval shall be filled with clean fill.

B. Method 2.

(I) The casing shall be installed full-length pursuant to

10 CSR 23-3.030(1)(A) and perforated below twenty (20') feet across the producing horizon.

(II) The borehole for domestic wells shall be eight and five-eighths inches (8 5/8") in diameter with the upper twenty feet (20') reamed out to ten and five-eighths inches (10 5/8") in diameter.

(III) The casing shall be a minimum of five and one-half inches (5 1/2") in diameter.

(IV) The upper twenty feet (20') of annular space shall be grouted and the remainder of the borehole below the grout shall be gravel packed if a packer is not installed. Table 3.13 lists the minimum amount of grout required by type and size of annulus or open hole.

7. All construction requirements pursuant to 10 CSR 23-3.030 shall be met except as stated in 10 CSR 23-3.090(3)(A)6.

(B) Unconsolidated material wells and glacial drift wells.

1. A minimum of twenty feet (20') of casing shall be installed above the screened or perforated interval.

2. The borehole for domestic wells shall be a minimum of ten and five-eighths inches (10 5/8") in diameter to casing depth. The borehole shall be a minimum of four inches (4") larger in diameter than the casing being installed.

3. Well casing shall be a minimum of five and one-half inches (5 1/2") in diameter.

4. Grouting Requirements.

A. The upper twenty feet (20') of casing shall be grouted. Table 3.13 lists the minimum amount of grout required by type and size of annulus or open hole.

B. Grouting materials and methods shall be followed pursuant to 10 CSR 23-3.030(1)(C).

C. A chlorinated gravel pack may be placed into the annular space or native materials may be allowed to collapse against the screen or perforated interval.

(4) Area 4. *[All persons engaged in drilling domestic wells in Area 4, northeast Missouri area, (Figure 7) shall—]* This area encompasses northeastern Missouri and is delineated separately because the glacial till overlies bedrock that has the potential to produce groundwater with high dissolved solids compared to other areas of the state (see Figure 3.5).

(A) *[If the well is to be drilled as a bedrock well—]* Bedrock wells.

1. *[Set no less than]* A minimum of forty feet (40') of casing, *[extending not less than]* shall be installed and extend a minimum of fifteen feet (15') into bedrock;.

2. Construct the *[drill]* borehole for domestic wells a minimum of eight and five-eighths inches (8 5/8") in diameter to the *[surface]* casing *[point;]* depth.

3. Install new *[steel or plastic]* casing *[as specified in]* pursuant to 10 CSR 23-3.030(1)(A). *[(steel) or 10 CSR 23-3.070 (plastic); and]*

4. The casing shall be a minimum of five and one-half inches (5 1/2") in diameter and the borehole shall be a minimum of two inches (2") larger in diameter than the casing being installed.

[4.]5. [Install and seal casing as follows:] Grouting Requirements.

A. *[Full-length grout is preferred and will ensure a better annular seal but sealing t]*The lowermost thirty feet (30') of casing *[using approved grout materials and procedures set out in 10 CSR 23-3.030 is required. Drill cuttings and a drive shoe or drill cuttings used by themselves are not approved grout materials. Drill cuttings may be placed above grouted interval to fill in the annular space—]* shall be grouted.

[(I) If steel casing is used, a drive shoe is required except on wells where the grout is allowed to cure before drilling resumes;

(II) If plastic casing is used, a packer, coupling or inverted bell is required to be secured near the bottom of the

casing and must hold the grout in place while drilling continues. No packer, coupling or inverted bell is required if grout is allowed to cure before drilling resumes; and

(III) The following times must be followed for curing grout when no packer is used:

(a) Hi-early cement—minimum set time of twelve (12) hours;

(b) Portland Type I cement—minimum set time of seventy-two (72) hours;

(c) Chipped bentonite—minimum hydration time of four (4) hours; and

(d) High solids bentonite slurry—varies based on additives and manufacturer's specifications;

(B) If the well is to be drilled as an unconsolidated materials well—

1. No less than twenty feet (20') of casing shall be set above the screened or perforated interval of the well;

2. The drill hole shall be constructed a minimum of ten and five-eighths inches (10 5/8") in diameter being at least four inches (4") larger in diameter than the casing to be placed into it. Well casing must be at least six-inch (6") nominal diameter. Graded, chlorinated gravel may be placed into the annular space adjacent to the well screen or natural (native) gravels in the formation being drilled can be allowed to cave back against the screen; and

3. Full-length grout is preferred (above the screened interval) and will ensure a better annular seal but sealing the upper twenty feet (20') of casing using approved grout materials and procedures set out in 10 CSR 23-3.030 is required.

(C) If usable amounts of water or water of acceptable quality are not expected to be available in deeper bedrock horizons and water is only available from the upper, fractured and weathered portion of bedrock, and if the water is coming from a zone that is at least forty feet (40') deep, a minimum of forty feet (40') of casing must be set but only one foot (1') of this casing need be set into the bedrock. This allows the use of shallower water horizons under some circumstances.]

B. Grouting materials and methods shall be followed pursuant to 10 CSR 23-3.030(1)(C).

C. The annular space above the grouted interval shall be filled with clean fill.

6. Shallow bedrock wells - If usable quantities of water are not expected to be available in deeper bedrock horizons the following construction method may be used.

A. Method 1.

(I) A minimum of forty feet (40') of casing shall be installed pursuant to 10 CSR 23-3.030(1)(A).

(II) A minimum of one foot (1') of casing shall extend into solid bedrock.

(III) The borehole for domestic wells shall be a minimum of eight and five-eighths inches (8 5/8") in diameter to the casing depth.

(IV) The casing shall be a minimum of five and a half inches (5 1/2") in diameter and the borehole shall be a minimum of two inches (2") larger in diameter than the casing being installed.

(V) The lower thirty feet (30') of casing shall be grouted. Table 3.12 lists the minimum amount of grout required by type and size of annulus or open hole.

(VI) Grouting materials and methods shall be followed pursuant to 10 CSR 23-3.030(1)(C).

(VII) The annular space above the grouted interval shall be filled with clean fill.

7. All construction requirements pursuant to 10 CSR 23-3.030 shall be met except as stated in 10 CSR 23-3.090(4)(A)6.

(B) Unconsolidated material wells and glacial drift wells.

1. A minimum of twenty feet (20') of casing shall be installed above the screened or perforated interval.

2. The borehole for domestic wells shall be a minimum of ten and five-eighths inches (10 5/8") in diameter to casing depth. The borehole shall be a minimum of four inches (4") larger in diameter than the casing being installed.

3. Well casing shall be a minimum of five and one-half inches (5 1/2") in diameter.

4. Grouting Requirements.

A. The upper twenty feet (20') of casing shall be grouted. Table 3.13 lists the minimum amount of grout required by type and size of annulus or open hole.

B. Grouting materials and methods shall be followed pursuant to 10 CSR 23-3.030(1)(C).

C. A chlorinated gravel pack may be placed into the annular space or native materials may be allowed to collapse against the screen or perforated interval.

(5) Area 5. *[All persons engaged in drilling domestic wells in area 5, Missouri Bootheel and all major stream alluvial areas (Figure 5) shall—]* This area encompasses the Missouri and Mississippi River floodplains and is delineated separately because the uppermost aquifer consists of unconsolidated alluvium (see Figure 3.6).

(A) *[If the well is to be drilled as a bedrock well—]* **Bedrock wells.**

1. *[Set no less than]* A minimum of eighty feet (80') of casing, extending not less than shall extend a minimum of thirty feet (30') into bedrock[;].

2. Construct the *[drill]* borehole a minimum of eight and five-eighths inches (8 5/8") in diameter to the *[surface]* casing *[point;]* depth.

3. Install new *[steel or plastic]* casing *[as specified in]* pursuant to 10 CSR 23-3.030(1)(A) *[(steel) or 10 CSR 23-3.070 (plastic);]*.

[4. Install and seal casing as follows:]

[A.14. Full-length grout is preferred and will ensure a better annular seal but sealing t/The lowermost thirty feet (30') of casing [using approved grout materials and procedures set out in 10 CSR 23-3.030 is required. Drill cuttings and a drive shoe or drill cuttings used by themselves are not approved grout materials. Drill cuttings may be placed above grouted interval to fill in the annular space;] shall be grouted pursuant to 10 CSR 23-3.030(1)(C). Table 3.10 lists the minimum amount of grout by type and size of annulus or open hole. The annular space above the grouted interval shall be filled with clean fill.

[(I) If steel casing is used, a drive shoe is required except on wells where the grout is allowed to cure before drilling resumes;

[(II) If plastic casing is used, a packer, coupling or inverted bell is required to be secured near the bottom of the casing and must hold the grout in place while drilling continues. No packer, coupling or inverted bell is required if grout is allowed to cure before drilling resumes; and

[(III) The following times must be followed for curing grout when no packer is used:

(a) Hi-early cement—minimum set time of twelve (12) hours;

(b) Portland Type I cement—minimum set time of seventy-two (72) hours;

(c) Chipped bentonite—minimum hydration time of four (4) hours; and

(d) High solids bentonite slurry—varies based on additives and manufacturer's specifications;]

(B) *[If the well is to be drilled as an u/Unconsolidated material[s] wells—].*

1. *[No less than]* A minimum of twenty feet (20') of casing shall be *[set]* installed above the screened or perforated interval *[of*

the well;].

2. *[The drill hole shall be constructed a minimum of four inches (4") larger than the casing to be placed into it. Well casing must be at least four-inch (4") nominal diameter. Graded, chlorinated gravel may be placed into the annular space adjacent to the well screen or natural (native) gravels in the formation being drilled can be allowed to cave back against the screen; and]* The borehole for domestic wells shall be a minimum of four inches (4") larger than the casing diameter installed. Unconsolidated material wells that have a casing diameter less than four inches (<4") in diameter are exempt from these rules.

3. *[Full-length grout is preferred (above the screened interval) and will ensure a better annular seal but sealing t/The upper twenty feet (20') of casing [using approved grout materials and procedures set out in 10 CSR 23-3.030 is required.] shall be grouted pursuant to 10 CSR 23-3.030(1)(C). Table 3.14 lists the minimum amount of grout required by type and size of annulus or open hole.*

[(C) Shallow unconsolidated wells located in Area 5, the Missouri Bootheel (Figure 8) and all major stream alluvial areas may be exempted from this rule. If the wells and drillers of the wells meet the following specifications they are exempted:

1. Wells are drilled, jetted, driven, washed or constructed in other ways;

2. Wells are constructed in unconsolidated materials; and

3. Well casing diameters are no larger than two inches (2").]

4. A chlorinated gravel pack may be placed into the annular space adjacent to the well screen or native materials may be allowed to collapse against the screen or perforated interval.

5. All construction requirements pursuant to 10 CSR 23-3.030 shall be met except as stated in 10 CSR 23-3.090(5)(B)2. and 3.

(6) Area 6. *[All persons engaged in drilling domestic wells in Area 6, St. Francois Mountain area (Figure 6) shall—]* This area encompasses the St. Francois Mountains and is delineated separately because igneous bedrock, which has low permeability, occurs close to the ground surface (Figure 3.7).

[(A) Where granite or igneous rock is within one hundred feet (100') below the surface, set not less than forty feet (40') of casing extending not less than fifteen feet (15') into bedrock—

1. Construct the drill hole a minimum of eight and five-eighths inches (8 5/8") in diameter to the surface casing point;

2. Install new steel or plastic casing as specified in 10 CSR 23-3.030 (steel) or 10 CSR 23-3.070 (plastic);

3. Install and seal casing as follows:

A. Full-length grout is preferred and will ensure a better annular seal, but sealing the lowermost thirty feet (30') of casing using approved grout materials and procedures set out in 10 CSR 23-3.030 is required. Drill cuttings and a drive shoe or drill cuttings used by themselves are not approved grout materials. Drill cuttings may be placed above the grouted interval to fill in the annular space;

(I) If steel casing is used, a drive shoe is required except on wells where the grout is allowed to cure before drilling resumes;

(II) If plastic casing is used, a packer, coupling or inverted bell is required to be secured near the bottom of the casing and must hold the grout in place while drilling continues. No packer, coupling or inverted bell is required if grout is allowed to cure before drilling resumes; and

(III) The following times must be followed for curing

grout when no packer is used:

(a) Hi-early cement—minimum set time of twelve (12) hours;

(b) Portland Type I cement—minimum set time of seventy-two (72) hours;

(c) Chipped bentonite—minimum hydration time of four (4) hours; and

(d) High solids bentonite slurry—varies based on additives and manufacturer's specifications.

(B) In areas where granite is more than one hundred feet (100') below the surface, set not less than eighty feet (80') of casing not less than thirty feet (30') into bedrock.

1. Construct the drillhole a minimum of eight and five-eighths inches (8 5/8") in diameter to the surface casing point.

2. Install new steel or plastic casing as specified in 10 CSR 23-3.030 (steel) or 10 CSR 23-3.070 (plastic);

3. Install and seal casing as follows:

A. Full-length grout is preferred and will ensure a better annular seal, but sealing the lowermost thirty feet (30') of casing using approved grout materials and procedures set out in 10 CSR 23-3.030 is required. Drill cuttings and a drive shoe or drill cuttings used by themselves are not approved grout materials. Drill cuttings may be placed above the grouted interval to fill in the annular space;

(I) If steel casing is used, a drive shoe is required except on wells where the grout is allowed to cure before drilling resumes;

(II) If plastic casing is used, a packer, coupling or inverted bell is required to be secured near the bottom of the casing and must hold the grout in place while drilling continues. No packer, coupling or inverted bell is required if grout is allowed to cure before drilling resumes; and

(III) The following times must be followed for curing grout when no packer is used:

(a) Hi-early cement—minimum set time of twelve (12) hours;

(b) Portland Type I cement—minimum set time of seventy-two (72) hours;

(c) Chipped bentonite—minimum hydration time of four (4) hours; and

(d) High solids bentonite slurry—varies based on additives and manufacturer's specifications.]

(A) Bedrock wells.

1. Bedrock wells where granite is less than one hundred feet (<100') below the surface.

A. A minimum of forty feet (40') of casing shall be installed and extend a minimum of fifteen feet (15') into solid bedrock. Example: If sixty feet (60') of residual material or broken rock is encountered during drilling above solid bedrock, then seventy-five feet (75') of casing shall be installed.

B. Construct the borehole for domestic wells a minimum of eight and five-eighths inches (8 5/8") in diameter to the casing depth.

C. Install new casing pursuant to 10 CSR 23-3.030(1)(A).

D. The lowermost thirty feet (30') of casing shall be grouted. Table 3.10 lists the minimum amount of grout required by type and size of annulus or open hole. The annular space above the grouted interval shall be filled with clean fill.

E. Grouting materials and methods shall be followed pursuant to 10 CSR 23-3.030(1)(C).

2. Bedrock wells where granite is one hundred feet or more (≥100') below the surface.

A. A minimum of eighty feet (80') of casing shall be installed and shall extend a minimum of thirty feet (30') into solid bedrock.

B. Construct the borehole for domestic wells a minimum of eight and five-eighths inches (8 5/8") in diameter to casing

depth.

C. Install new casing pursuant to 10 CSR 23-3.030(1)(A).

D. The lowermost thirty feet (30') of casing shall be grouted. Table 3.10 lists the minimum amount of grout required by type and size of annulus or open hole. The annular space above the grouted interval shall be filled with clean fill.

E. Grouting materials and methods shall be followed pursuant to 10 CSR 23-3.030(1)(C).

(B) Unconsolidated material wells.

1. A minimum of twenty feet (20') of casing shall be installed above the screened or perforated interval.

2. The borehole for domestic wells shall be a minimum of ten and five-eighths inches (10 5/8") in diameter. The borehole shall be a minimum of four inches (4") larger in diameter than the casing being installed.

3. Install new casing pursuant to 10 CSR 23-3.030(1)(A).

4. The upper twenty feet (20') of casing shall be grouted. Table 3.11 lists the minimum amount of grout required by type and size of annulus or open hole.

5. Grouting materials and methods shall be followed pursuant to 10 CSR 23-3.030(1)(C).

6. A chlorinated gravel pack may be placed into the annular space or native materials may be allowed to collapse against the well screen or perforated interval.

(7) Area 7 (formerly Sensitive Area A). This area encompasses Osage, Gasconade, Maries, and parts of Phelps, Crawford, and Franklin counties and is delineated separately because it is overlain in part by Pennsylvanian-aged bedrock which is capable of producing groundwater with high dissolved solids (see Figure 3.2).

(A) Bedrock Wells.

1. A minimum of eighty feet (80') of casing shall be installed and extend a minimum of thirty feet (30') into solid bedrock. Example: If sixty feet (60') of residual material or broken rock is encountered during drilling above solid bedrock, then ninety feet (90') of casing shall be installed.

2. In areas where Pennsylvanian-age strata (shale, sandstone, and/or clay) are present, a minimum of one hundred fifty feet (150') of casing shall be installed and extend at least thirty feet (30') below the Pennsylvanian age strata (shale, sandstone, and/or clay).

3. The borehole for domestic wells shall be a minimum of eight and five-eighths inches (8 5/8") in diameter to casing depth.

4. Install new casing pursuant to 10 CSR 23-3.030(1)(A).

5. Grouting Requirements.

A. The lowermost thirty feet (30') of casing shall be grouted. Table 3.10 lists the minimum amount of grout required by type and size of annulus or open hole.

B. Grouting materials and methods shall be followed pursuant to 10 CSR 23-3.030(1)(C).

C. The annular space above the grouted interval shall be filled with clean fill.

(B) Unconsolidated material wells.

1. A minimum of twenty feet (20') of casing shall be installed above the screened or perforated interval.

2. The borehole for domestic wells shall be a minimum of ten and five-eighths inches (10 5/8") in diameter and a minimum of four inches (4") larger in diameter than the casing being installed.

3. Install new casing pursuant to 10 CSR 23-3.030(1)(A).

4. Grouting Requirements.

A. The upper twenty feet (20') of casing shall be grouted. Table 3.11 lists the minimum amount of grout required by and size of annulus or open hole.

B. Grouting materials and methods shall be followed pursuant to 10 CSR 23-3.030(1)(C).

C. A chlorinated gravel pack may be placed into the annular space or native materials may be allowed to collapse against

the well screen or perforated interval.

(8) Area 8 (formerly Sensitive Area B). This area encompasses a one-quarter (¼) mile buffer from the twenty foot (20') water depth contour line of major lakes in Missouri (see Figure 3.2).

(A) The major lakes include:

1. Truman;
2. Stockton;
3. Table Rock;
4. Bull Shoals;
5. Lake of the Ozarks;
6. Pomme de Terre;
7. Norfolk; and
8. Clearwater.

(B) Bedrock Wells.

1. Casing shall be installed fifty feet (50') below the deepest point of the lake within one-quarter (¼) mile radius of the well location. Casing shall not be less than the minimum requirements outlined in Drill Area 1 (10 CSR 23.090(1)) a minimum of eighty feet (80') and extend thirty feet (30') into bedrock. Formula: well site elevation (feet) - deepest lake elevation within one-quarter (¼) mile (feet) + fifty feet (50') = casing depth. Example: 1000' (well site elevation) - 850' (deepest lake elevation within one-quarter (¼) mile) + 50' = 200' casing depth.

2. A casing point may be requested prior to drilling in Drill Area 8.

3. The borehole for domestic wells shall be a minimum of eight and five-eighths inches (8 ⅝") in diameter to casing depth.

4. Install new casing pursuant to 10 CSR 23-3.030(1)(A).

5. When plastic casing is used liner shall not be used in lieu of casing.

6. When steel casing is used and the minimum casing depth cannot be achieved due to geologic reasons, casing shall be installed to a minimum of eighty feet (80') extending a minimum of thirty feet (30') into bedrock and a liner used to achieve the remaining casing depth provided the following requirements are met:

A. Have a minimum annular space of one-half inch (½");

B. Have a minimum of two (2) three (3)-ribbed rubber packers (K-packers) secured at or below the bottom of the minimum casing depth;

C. Have the top of the liner extend to within ten feet (10') of the top of casing.

D. Have packers placed a maximum of ten feet (10') apart; and

E. Grout pursuant to 10 CSR 23-3.090(8)(B)7. using the gravity or tremie grouting method using cement slurry or coated bentonite pellets.

F. Liner specifications shall be followed pursuant to 10 CSR 23-3.080(1), (2), (4), and (5).

7. Grouting Requirements.

A. The lowermost thirty feet (30') of casing shall be grouted. Table 3.10 lists the minimum amount of grout required by type and size of annulus or open hole.

B. Grouting materials and methods shall be followed pursuant to 10 CSR 23-3.030(1)(C).

C. The annular space above the grouted interval shall be filled with clean fill.

(C) Unconsolidated material wells. The unconsolidated requirements for the Drill Area adjacent to the lake apply.

(9) Area 9 (formerly Sensitive Area C). This area encompasses Greene and parts of Christian county where rapid urbanization is occurring in a sensitive geologic and hydrologic setting. The upper aquifer (Springfield Plateau Aquifer) and lower aquifer (Ozark Aquifer) are separated by low-permeability bedrock (Ozark Confining Unit). This low-permeability bedrock limits migration of groundwater and any associated contamination

from the upper aquifer to the lower aquifer (see Figure 3.2).

(A) Bedrock Wells.

1. The casing shall be installed a minimum of ten feet (10') below the Ozark Confining Unit or as indicated in the digital geospatial dataset "DRILL AREAS" developed by the Missouri Department of Natural Resources, Missouri Geological Survey. Hard copies may be obtained by contacting the Missouri Department of Natural Resources, Missouri Geological Survey, 111 Fairgrounds Road, Rolla, MO 65401.

2. A casing point request may be submitted to the department.

3. The borehole for domestic wells shall be a minimum of eight and five-eighths inches (8 ⅝") in diameter to casing depth.

4. Install new casing pursuant to 10 CSR 23-3.030(1)(A).

5. When plastic casing is used liner shall not be used in lieu of casing.

6. When steel casing is used and the minimum casing depth cannot be achieved due to geologic reasons, casing shall be installed to a minimum of one hundred feet (100') extending a minimum of thirty feet (30') into bedrock and a liner used to achieve the remaining casing depth provided the following requirements are met:

A. Have a minimum annular space of one-half inch (½");

B. Have a minimum of two (2) three (3)-ribbed rubber packers (K-packers) secured at or below the bottom of the Ozark Confining Unit pursuant to 10 CSR 23-3.090(9)(A)1.;

C. Have the top of the liner extend to within ten feet (10') of the top of casing;

D. Have packers placed a maximum of ten feet (10') apart; and

E. Grout pursuant to 10 CSR 23-3.090(9)(A)7. using the gravity or tremie grouting method using cement slurry or coated bentonite pellets;

F. Liner specifications shall be followed pursuant to 10 CSR 23-3.080(1), (2), (4), and (5).

7. Grouting Requirements.

A. The Ozark Confining Unit shall be grouted from ten feet (10') below the formation to the top of the shale and at a minimum the lowermost thirty feet (30') of casing shall be grouted.

B. When the casing extends more than ten feet (10') below the bottom of the Ozark Confining Unit, more than thirty feet (30') of grout will be required to seal off the Ozark Confining Unit.

C. Grouting materials and methods shall be followed pursuant to 10 CSR 23-3.030(1)(C).

D. The annular space above the grouted interval shall be filled with clean fill.

(B) Unconsolidated material wells. The unconsolidated requirements for Drill Area 1 apply.

(10) Area 10 (formerly Special Area 1). This area encompasses a portion of southeastern Missouri and is composed of deeply weathered and highly fractured bedrock where openings may be filled with mud extending deep into bedrock (see Figure 3.8).

(A) Bedrock Wells.

1. A minimum of eighty feet (80') of casing shall be installed and extend a minimum of fifteen feet (15') into solid bedrock. Example: If sixty feet (60') of residual material or broken rock is encountered during drilling above solid bedrock, then seventy five feet (75') of casing shall be installed. If solid bedrock is not encountered within one hundred and fifty feet (150') the contractor may consult the department for further instructions regarding a variance or install casing into deeper solid bedrock.

2. The borehole for domestic wells shall be a minimum of eight and five-eighths inches (8 ⅝") in diameter to casing depth.

3. In areas where poor drilling conditions exist and it is necessary to drive multiple strings of smaller diameter casing

through the surface casing, each succeeding smaller diameter casing shall extend into the preceding casing at least twenty feet (20').

4. Install new steel casing pursuant to 10 CSR 23-3.030(1)(A).

5. Grouting Requirements.

A. If casing is driven, see 10 CSR 23-3.030(1)(D) for liner and grouting requirements.

B. If casing is not driven, the lowermost thirty feet (30') of casing shall be grouted. Table 3.10 lists the minimum amount of grout required by type and size of annulus or open hole.

(I) Grouting materials and methods shall be followed pursuant to 10 CSR 23-3.030(1)(C).

(II) The annular space above the grouted interval shall be filled with clean fill.

(B) If unconsolidated material wells are drilled in Area 10, Drill Area 1 requirements for unconsolidated wells apply.

(11) Area 11 (formerly Special Area 2). This area encompasses Newton and Jasper County and is delineated separately due to the contamination of portions of the upper aquifer by one (1) or more of the following: lead, cadmium, chlorinated VOCs including TCE, TCE degradation products, or other contaminants pursuant to 10 CSR 60-4. The upper aquifer (Springfield Plateau Aquifer) and lower aquifer (Ozark Aquifer) are separated by low-permeability bedrock (Ozark Confining Unit). This low-permeability bedrock limits migration of groundwater and any associated contamination from the upper aquifer to the lower aquifer (see Figure 3.2).

(A) Bedrock Wells.

1. Consult the digital geospatial dataset "DRILL AREAS" developed by the Missouri Department of Natural Resources, Missouri Geological Survey. Hard copies may be obtained by contacting the Missouri Department of Natural Resources, Missouri Geological Survey, 111 Fairgrounds Road, Rolla, MO 65401. This dataset identifies the maximum well depth for wells completed in the upper aquifer; the required casing depth for a lower aquifer well; TCE Concern Areas; and TCE Impact Areas.

2. Wells outside of the TCE Impact Area may be installed in the upper aquifer provided they do not penetrate the Ozark Confining Unit; or wells may be installed and cased/sealed through the Ozark Confining Unit and open to only the lower aquifer.

3. New upper aquifer wells outside of the TCE Impact Area.

A. Total depth of the well shall not penetrate the Ozark Confining Unit and not exceed the upper depth indicated digital geospatial dataset "DRILL AREAS".

B. A minimum of eighty feet (80') of casing shall be installed and extend a minimum of thirty feet (30') into solid bedrock. Example: If sixty feet (60') of residual material or broken rock is encountered during drilling above solid bedrock, then ninety feet (90') of casing will be installed.

C. The borehole for domestic wells shall be a minimum of eight and five-eighths inches (8 5/8") in diameter to casing depth.

D. Install new casing pursuant to 10 CSR 23-3.030(1)(A).

E. Grouting Requirements.

(I) The lowermost thirty feet (30') of casing shall be grouted. Table 3.10 lists the minimum amount of grout required by type and size of annulus or open hole.

(II) Grouting materials and methods shall be followed pursuant to 10 CSR 23-3.030(1)(C).

(III) The annular space above the grouted interval shall be filled with clean fill.

F. New upper aquifer wells within the TCE Concern Area shall follow sampling requirements pursuant to 10 CSR 23-3.090(11)(A)6.

4. New lower aquifer wells outside of the TCE Impact Area.

A. The casing shall be installed a minimum of ten feet

(10') below the Ozark Confining Unit or to the lower depth indicated on the digital geospatial dataset "DRILL AREAS".

B. A casing point request may be submitted to the department.

C. Install new casing pursuant to 10 CSR 23-3.030(1)(A).

D. If steel casing is used, the borehole shall be a minimum of eight and five-eighths inches (8 5/8") in diameter to casing depth.

E. When steel casing is used and the minimum casing depth cannot be achieved due to geologic reasons, casing shall be installed to a minimum of eighty feet (80') extending thirty feet (30') into bedrock and a liner used to achieve the remaining casing depth provided the following requirements are met:

(I) Have a minimum annular space of one-half inch (1/2");

(II) Have a minimum of two (2) three (3)-ribbed rubber packers (K-packers) secured at or below the bottom of the Ozark Confining Unit pursuant to 10 CSR 23-3.090(11)(A)4.A.;

(III) Have the top of the liner extend to within ten feet (10') of the top of casing;

(IV) Have packers placed a maximum of ten feet (10') apart; and

(V) Grout pursuant to 10 CSR 23-3.090(11)(A)4.G. from the top packer to extend ten feet (10') inside the casing using the gravity or tremie grouting method using cement slurry or coated bentonite pellets;

(VI) Liner specifications shall be followed pursuant to 10 CSR 23-3.080(1), (2), (4), and (5).

F. If plastic casing is used, the borehole shall be a minimum of ten inches (10") in diameter to the casing depth. When plastic casing is used liner shall not be used in lieu of casing.

G. Grouting Requirements.

(I) Full length grout is required.

(II) Grouting methods shall be Tremie Pressure, Pressure, or Positive Displacement pursuant to 10 CSR 23-3.030(1)(C)1.C., 10 CSR 23-3.030(1)(C)1.D., and 10 CSR 23-3.030(1)(C)1.F.

(III) Grouting materials shall be cement slurry or high-solids bentonite slurry.

(IV) Wells with eighty feet (80') of casing may use grouting materials and methods pursuant to 10 CSR 23-3.030(1)(C).

H. All construction requirements pursuant to 10 CSR 23-3.030 shall be met except as provided in 10 CSR 23-3.090(11)(A)4.G.

I. New lower aquifer wells within the TCE Concern Area shall follow sampling requirements pursuant to 10 CSR 23-3.090(11)(A)6.

5. Major reconstruction of wells in Area 11 that involves exceeding the upper depth indicated in the digital geospatial dataset "DRILL AREAS" or penetrating the Ozark Confining Unit requires advanced written approval from the department.

6. Additional Requirements for wells in TCE Concern Areas.

A. Water sampling and analysis shall be performed for TCE and its degradation products for new wells.

B. Permitted pump installers and owners who self-install pumps are responsible for ensuring sampling is completed according to laboratory sampling protocol and submitting sample results within sixty (60) days of pump installation.

C. The laboratory that analyzes the sample shall be certified by the EPA or the department for such analyses.

D. Prior to sampling, the well shall be purged continuously for a minimum of two (2) hours and water samples collected from the tap closest to the well.

E. All wells in a TCE Concern Area shall be constructed with a sampling port or tap within twenty feet (20') of the well-head.

F. If an upper aquifer well contains detectable levels of

TCE or its degradation products, the well shall—

(I) Be plugged full length with approved grout material; or

(II) Be reconstructed and sealed through the Ozark Confining Unit pursuant to 10 CSR 23-3.090(11)(A)5.

7. Well installation in TCE Impact Areas.

A. The casing shall be installed a minimum of ten feet (10') below the Ozark Confining Unit or to the lower depth indicated in the digital geospatial dataset "DRILL AREAS".

B. A casing point request may be submitted to the department.

C. Install new casing pursuant to 10 CSR 23-3.030(1)(A).

D. The borehole shall be a minimum of ten inches (10") in diameter to casing depth.

E. Grouting Requirements.

(I) Full length grout is required.

(II) Grouting methods shall be Tremie Pressure, Pressure, or Positive Displacement pursuant to 10 CSR 23-3.030(1)(C)1.C., 10 CSR 23-3.030(1)(C)1.D., and 10 CSR 23-3.030(1)(C)1.F.

(III) Grouting materials shall be cement slurry or high-solids bentonite slurry.

F. Water sampling and analysis shall be performed for TCE and its degradation products for new wells.

G. Permitted pump installers and owners who self-install pumps are responsible for ensuring sampling is completed according to laboratory sampling protocol and submitting sample results within sixty (60) days of pump installation.

H. The laboratory that analyzes the sample shall be certified by the EPA or the department for such analyses.

I. Prior to sampling, the well shall be purged continuously for a minimum of two (2) hours and water samples collected from the tap closest to the well.

J. All wells in the TCE impact areas shall be constructed with a sampling port or tap within twenty feet (20') of the wellhead.

(B) Unconsolidated Material Wells.

1. If unconsolidated material wells are drilled in Area 11 outside TCE Concern and TCE Impact areas, Drill Area 1 requirements for unconsolidated wells apply.

2. Advanced written approval from the department is required if unconsolidated material wells are drilled in TCE Concern or TCE Impact areas.

(12) Area 12 (formerly Special Area 3). This area encompasses portions of Franklin County within and south of the city of New Haven and is delineated separately due to the contamination of portions of the aquifer by one (1) or more of the following known contaminants: tetrachloroethylene or perchloroethylene (PCE), trichloroethylene (TCE), TCE degradation products, and may include other contaminants pursuant to 10 CSR 60-4. It is necessary to implement more stringent well construction standards for new wells that are drilled into the aquifer and to limit the deepening of existing upper aquifer wells (see Figure 3.9).

(A) New Wells.

1. Prior written approval and construction specifications shall be obtained from the department for any new wells constructed in Area 12.

2. Water sampling for contaminants will be required pursuant to 10 CSR 23-3.090(12)(C).

3. Drilling shall cease and the department is to be notified immediately if PCE or TCE is encountered above the maximum contaminant level (MCL) or action level (AL). The department will determine further action.

(B) Reconstruction of Existing Wells.

1. Prior written approval and reconstruction specifications shall be obtained from the department for any reconstructed wells in Area 12.

2. Water sampling for contaminants will be required pursuant to 10 CSR 23-3.090(12)(C). Wells that are contaminated at levels exceeding maximum contaminant levels (MCLs) and/or action levels (ALs) shall not be deepened.

3. Drilling shall cease and the department is to be notified immediately if PCE or TCE is encountered above the maximum contaminant level (MCL) or action level (AL) during reconstruction. The department will determine further action.

(C) Water Sampling.

1. Groundwater sampling for contaminants is required according to laboratory sampling protocol for any new well or reconstruction and methods will be established on a case-by-case basis by the department.

2. The well installation contractor is responsible for ensuring sampling is conducted throughout the drilling process and results submitted in accordance with pre-approved department sampling methods. Final sampling of the well shall be completed by the pump installation contractor within sixty (60) days of pump installation. Wells will not be certified or registered until all sampling has been completed.

3. Sampling and analysis shall be performed for known contaminants listed in 10 CSR 23-3.090(12) and other contaminants as determined by the department.

4. The laboratory that analyzes the sample shall be certified by the EPA or the department for analyses being requested.

5. All new and deepened wells shall be constructed with a sampling port or tap at or before the pressure tank within twenty feet (20') of the wellhead.

(D) Plugging.

1. Wells shall be plugged full length using bentonite slurry or cement grout via one of the tremie methods.

2. All plugging requirements in 10 CSR 23-3.110 shall be met except as required in 10 CSR 23-3.090(12)(D).

(E) All drilling-derived fluids, displaced water, and solid materials shall be containerized and sampled before disposal in accordance with federal, state, and local regulations based on analytical results.

(F) Any completed (new or reconstructed) well in which PCE and/or TCE is encountered at levels above MCL and/or AL shall be plugged full-length pursuant to 10 CSR 23-3.090(12)(D).

(13) Area 13 (formerly Special Area 4). This area encompasses portions of St. Charles County west of the city of Weldon Spring and is delineated separately due to contamination of portions of the aquifer by one (1) or more of the following known contaminants listed by source in Table 3.15. In this area it is necessary to implement more stringent well construction standards for new wells that are drilled into the aquifer and to limit the deepening of existing upper aquifer wells (see Figure 3.10).

Table 3.15. Known contaminants of Drill Area 13 by source.

Source	Known Contaminants ¹
U.S. Army Corps of Engineers	trinitrotoluene (TNT), dinitrotoluene (DNT)
Department of Energy Main Site	2,4,6-TNT, 2,4-DNT, 2,6-DNT, dinitrobenzene (1,3-DNB), nitrobenzene (NB), nitrate, uranium, and trichloroethylene (TCE)
Department of Energy Quarry	uranium and 2,4-DNT

¹May also include other contaminants pursuant to 10 CSR 60-4.

(A) New Wells.

1. Prior written approval and construction specifications shall be obtained from the department for any wells constructed in Area 13.

2. Water sampling for contaminants will be required pursuant to 10 CSR 23-3.090(13)(C).

3. Drilling shall cease and the department is to be notified immediately if contaminants listed in Table 3.15 or other contaminants pursuant to 10 CSR 60-4 are encountered at levels above the maximum contaminant level (MCL) or action level (AL). The department will determine further action.

(B) Reconstruction of Existing Wells.

1. Prior written approval and construction specifications shall be obtained from the department for any reconstructed wells in Area 13.

2. Groundwater sampling for contaminants listed in Table 3.15 or other contaminants pursuant to 10 CSR 60-4 will be required in advance of any deepening. Wells that are contaminated at levels exceeding maximum contaminant levels (MCLs) and/or action levels (ALs) shall not be deepened.

3. Any well approved to be deepened which encounters contaminants listed in Table 3.15 or other contaminants pursuant to 10 CSR 60-4 at levels above MCL and/or AL, drilling shall cease and the department shall be notified immediately. The department will determine further action.

(C) Water Sampling.

1. Groundwater sampling for contaminants is required according to laboratory sampling protocol for any new well or reconstruction and methods will be established on a case-by-case basis by the department.

2. The well installation contractor is responsible for ensuring sampling is conducted throughout the drilling process and results submitted in accordance with pre-approved department sampling methods. Final sampling of the well shall be completed by the pump installation contractor within sixty (60) days of pump installation. Wells will not be certified or registered until all sampling has been completed.

3. Sampling and analysis shall be performed for contaminants listed in Table 3.15.

4. The laboratory that analyzes the sample shall be certified by the EPA or the department for such analyses.

5. All new and deepened wells shall be constructed with a sampling port or tap at or before the pressure tank within twenty feet (20') of the wellhead.

(D) Plugging.

1. Wells shall be plugged full length using bentonite slurry or cement grout via one (1) of the tremie methods.

2. All plugging requirements in 10 CSR 23-3.110 shall be met except as required in 10 CSR 23-3.090(13)(D).

(E) All drilling-derived fluids, displaced water, and solid materials shall be containerized and sampled before disposal in accordance with federal, state, and local regulations based on analytical results.

(F) Any completed (new or reconstructed) well in which contaminants listed in Table 3.15 or other contaminants pursuant to 10 CSR 60-4 are encountered at levels above the MCL and/or AL shall be plugged full-length (10 CSR 23-3.090(13)(D)) or with approval from the department the well owner may be allowed to

use the well provided groundwater quality will not be degraded further.

(G) Notwithstanding these provisions, the federal government does not waive its rights and authority under federal law, regulations, or executive order within the boundaries and applicable jurisdiction of federal property.

Table 3.10 All Drilling Areas (Bedrock Water Wells). Minimum Number of Bags of Grout Required in Annular Space (Ann.) or Open Hole (O.H.) for Sealing Casing with a Minimum Grout Seal of Thirty Feet (30').

Type of Grout	Casing Outer Diameter 6 5/8" (6" Nominal) -- Applies to All Drilling Areas											
	Borehole Diameter (inches)											
	8 5/8"		8 3/4"		9		9 1/2"		10		10 5/8"	
	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.
CEMENT												
Portland Type I	4.3	10.4	4.6	10.7	5.2	11.3	6.5	12.6	7.8	14.0	9.6	15.8
Portland Type III	4.3	10.4	4.6	10.7	5.2	11.3	6.5	12.6	7.8	14.0	9.6	15.8
BENTONITE												
Pellets												
1/2" Baroid Pellets	6.8	16.6	7.3	17.1	8.3	18.0	10.3	20.1	12.5	22.3	15.4	25.2
3/8" Baroid Pellets	7.2	17.5	7.7	18.0	8.7	19.0	10.9	21.2	13.2	23.5	16.2	26.5
1/4" Baroid Pellets	7.1	17.4	7.6	17.9	8.7	18.9	10.8	21.1	13.1	23.4	16.1	26.4
Wyo-Bend Tablets	7.5	18.4	8.1	18.9	9.2	20.0	11.4	22.3	13.9	24.7	17.0	27.9
Volclay 1/2"	7.6	18.6	8.2	19.1	9.3	20.2	11.6	22.6	14.0	25.0	17.2	28.2
Volclay 3/8"	7.9	19.2	8.4	19.7	9.6	20.9	12.0	23.3	14.5	25.8	17.8	29.1
Volclay 1/4"	8.1	19.8	8.7	20.4	9.9	21.6	12.3	24.0	14.9	26.6	18.4	30.0
Chips												
Baroid Hole Plug	7.2	17.7	7.8	18.2	8.8	19.2	11.0	21.4	13.3	23.7	16.4	26.8
Wyo-Bend Coarse	6.1	14.8	6.5	15.2	7.4	16.1	9.2	18.0	11.2	19.9	13.7	22.5
Wyo-Bend Medium	6.3	15.3	6.7	15.7	7.6	16.7	9.5	18.6	11.5	20.6	14.2	23.2
Volclay Coarse	6.7	16.4	7.2	16.8	8.2	17.8	10.2	19.9	12.3	22.0	15.2	24.8
Volclay Medium	6.9	16.8	7.4	17.3	8.4	18.3	10.5	20.4	12.7	22.6	15.6	25.5
Granular												
Benseal	6.3	15.3	6.7	15.8	7.7	16.7	9.6	18.6	11.6	20.6	14.2	23.3
Wyo-bend No. 8	6.1	14.8	6.5	15.2	7.4	16.1	9.2	18.0	11.2	19.9	13.7	22.5
Wyo-bend No. 16	6.1	14.8	6.5	15.2	7.4	16.1	9.2	18.0	11.2	19.9	13.7	22.5
Slurry												
Baroid	1.5	3.6	1.6	3.7	1.8	3.9	2.3	4.4	2.7	4.9	3.4	5.5
Ili-yield	1.1	2.7	1.2	2.8	1.3	2.9	1.7	3.3	2.0	3.6	2.5	4.1
Wyo-bend	1.6	3.8	1.7	3.9	1.9	4.2	2.4	4.6	2.9	5.1	3.6	5.8
Volclay	1.4	3.5	1.5	3.6	1.7	3.8	2.2	4.2	2.6	4.6	3.2	5.3

Table 3.11 All Drilling Areas (Unconsolidated Water Wells). Minimum Number of Bags of Grout Required in Annular Space (Ann.) or Open Hole (O.H.) for Sealing Casing with a Minimum Upper Grout Seal of Twenty Feet (20').

Type of Grout	CASING OUTER DIAMETER 6 5/8" (6" NOMINAL) – APPLIES TO ALL DRILLING AREAS											
	Borehole Diameter (inches)											
	10 3/4"		12 5/8"		14 3/8"		16"		18"		20"	
	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.
CEMENT												
Portland Type I	6.4	10.5	10.8	14.9	15.9	20.0	19.8	23.9	26.1	30.2	33.2	37.3
Portland Type III	6.4	10.5	10.8	14.9	15.9	20.0	19.8	23.9	26.1	30.2	33.2	37.3
BENTONITE												
Pellets												
1/2" Baroid Pellets	10.3	16.8	17.2	23.7	25.3	31.8	31.5	38.0	41.6	48.1	52.9	59.4
3/8" Baroid Pellets	10.8	17.7	18.1	25.0	26.6	33.5	33.2	40.1	43.8	50.7	55.7	62.6
1/4" Baroid Pellets	10.8	17.6	18.0	24.9	26.5	33.4	33.0	39.9	43.6	50.5	55.5	62.3
Wyo-Bend Tablets	11.4	18.6	19.0	26.3	28.0	35.2	34.9	42.1	46.1	53.3	58.6	65.8
Volclay 1/2"	11.5	18.8	19.3	26.6	28.3	35.7	35.3	42.7	46.7	54.0	59.3	66.7
Volclay 3/8"	11.9	19.4	19.9	27.4	29.2	36.8	36.4	44.0	48.1	55.7	61.2	68.8
Volclay 1/4"	12.2	20.0	20.5	28.3	30.2	38.0	37.6	45.4	49.7	57.5	63.2	71.0
Chips												
Baroid HolePlug	10.9	17.9	18.3	25.2	26.9	33.9	33.6	40.5	44.3	51.3	56.3	63.3
Wyo-Bend Coarse	9.2	15.0	15.3	21.2	22.6	28.4	28.1	34.0	37.2	43.0	47.3	53.1
Wyo-Bend Medium	9.5	15.5	15.9	21.9	23.3	29.4	29.1	35.1	38.4	44.4	48.8	54.9
Volclay Coarse	10.1	16.6	17.0	23.4	24.9	31.4	31.1	37.5	41.1	47.5	52.2	58.7
Volclay Medium	10.4	17.0	17.4	24.0	25.6	32.3	32.0	38.6	42.2	48.8	53.7	60.3
Granular												
Benseal	9.5	15.5	15.9	21.9	23.4	29.4	29.2	35.2	38.5	44.6	49.0	55.0
Wyo-bend No. 8	9.2	15.0	15.3	21.2	22.6	28.4	28.1	34.0	37.2	43.0	47.3	53.1
Wyo-bend No. 16	9.2	15.0	15.3	21.2	22.6	28.4	28.1	34.0	37.2	43.0	47.3	53.1
Slurry												
Baroid	2.2	3.7	3.7	5.2	5.5	6.9	6.9	8.3	9.1	10.5	11.5	13.0
Hi-yield	1.7	2.7	2.8	3.9	4.1	5.2	5.1	6.2	6.8	7.8	8.6	9.7
Wyo-bend	2.4	3.9	4.0	5.5	5.8	7.3	7.3	8.8	9.6	11.1	12.2	13.7
Volclay	2.1	3.5	3.6	4.9	5.3	6.6	6.6	7.9	8.7	10.0	11.0	12.4

Table 3.12 Drilling Areas 3 and 4 (Bedrock or Shallow Bedrock Wells Method 1 Using Five and One-half Inch (5 1/2") Casing Diameter). Minimum Number of Bags of Grout Required in Annular Space (Ann.) or Open Hole (O.H.) for Sealing Casing with a Minimum Grout Seal of Thirty Feet (30').

CASING OUTER DIAMETER 5 1/2" (5" NOMINAL) – APPLIES TO DRILLING AREAS 3 AND 4 ONLY

Type of Grout	Borehole Diameter (inches)					
	9 1/2		10		10 3/4	
	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.
CEMENT						
Portland Type I	8.4	12.6	9.8	14.0	11.6	15.8
Portland Type III	8.4	12.6	9.8	14.0	11.6	15.8
BENTONITE						
Pellets						
1/2" Baroid Pellets	13.4	20.1	15.5	22.3	18.4	25.2
3/4" Baroid Pellets	14.1	21.2	16.4	23.5	19.4	26.5
1/4" Baroid Pellets	14.0	21.1	16.3	23.4	19.3	26.4
Wyo-Bend Tablets	14.8	22.3	17.2	24.7	20.4	27.9
Volclay 1/2"	15.0	22.6	17.4	25.0	20.7	28.2
Volclay 3/8"	15.5	23.3	18.0	25.8	21.3	29.1
Volclay 1/4"	16.0	24.0	18.6	26.6	22.0	30.1
Chips						
Baroid Hole Plug	14.2	21.4	16.6	23.7	19.6	26.8
Wyo-Bend Coarse	11.9	18.0	13.9	19.9	16.5	22.5
Wyo-Bend Medium	12.3	18.6	14.3	20.6	17.0	23.2
Volclay Coarse	13.2	19.9	15.3	22.0	18.2	24.9
Volclay Medium	13.6	20.4	15.8	22.6	18.7	25.5
Granular						
Benseal	12.4	18.6	14.4	20.6	17.1	23.3
Wyo-bend No. 8	11.9	18.0	13.9	19.9	16.5	22.5
Wyo-bend No. 16	11.9	18.0	13.9	19.9	16.5	22.5
Slurry						
Baroid	2.9	4.4	3.4	4.9	4.0	5.5
Hi-yield	2.2	3.3	2.5	3.6	3.0	4.1
Wyo-Bend	3.1	4.6	3.6	5.1	4.3	5.8
Volclay	2.8	4.2	3.2	4.6	3.8	5.3

Table 3.13 Drilling Areas 3 and 4 (Unconsolidated or Shallow Bedrock Water Wells Method 2 Using Five and One-half Inch (5 1/2") Casing Diameter). Minimum Number of Bags of Grout Required in the Annular Space (Ann.) or Open Hole (O.H.) for Sealing Casing for with a Minimum Upper Grout Seal of Twenty (20').

CASING OUTER DIAMETER 5 1/2" (5" NOMINAL) – APPLIES TO DRILLING AREAS 3 AND 4 ONLY.														
Type of Grout	Borehole Diameter (inches)													
	10 3/8		12 3/8		14 3/8		16		18		20		24	
	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.
CEMENT														
Portland Type I	7.7	10.5	12.1	14.9	17.1	20.0	20.0	23.9	27.4	30.2	34.5	37.3	50.9	53.7
Portland Type III	7.7	10.5	12.1	14.9	17.1	20.0	20.0	23.9	27.4	30.2	34.5	37.3	50.9	53.7
BENTONITE														
Pellets														
1/2" Baroid Pellets	12.3	16.8	19.2	23.7	27.3	31.8	31.5	38.0	43.6	48.1	54.9	59.4	81.1	85.6
3/8" Baroid Pellets	13.0	17.7	20.2	25.0	28.8	33.5	33.2	40.1	46.0	50.7	57.9	62.6	85.4	90.2
1/4" Baroid Pellets	12.9	17.6	20.1	24.9	28.6	33.4	33.1	39.9	45.8	50.5	57.6	62.3	85.0	89.8
Wyo-Bend Tablets	13.6	18.6	21.3	26.3	30.2	35.2	34.9	42.1	48.3	53.3	60.8	65.8	89.8	94.8
Volclay 1/2"	13.8	18.8	21.5	26.6	30.6	35.7	35.4	42.7	49.0	54.0	61.6	66.7	91.0	96.0
Volclay 3/8"	14.2	19.4	22.2	27.4	31.6	36.8	36.5	44.0	50.5	55.7	63.6	68.8	93.8	99.0
Volclay 1/4"	14.7	20.0	22.9	28.3	32.6	38.0	37.6	45.4	52.1	57.5	65.6	71.0	96.8	102
Chips														
Baroid HolePlug	13.1	17.9	20.5	25.2	29.1	33.9	33.6	40.5	46.5	51.3	58.5	63.3	86.4	91.1
Wyo-Bend Coarse	11.0	15.0	17.2	21.2	24.4	28.4	28.1	34.0	39.0	43.0	49.1	53.1	72.4	76.4
Wyo-Bend Medium	11.3	15.5	17.7	21.9	25.2	29.4	29.1	35.1	40.3	44.4	50.7	54.9	74.8	79.0
Volclay Coarse	12.1	16.6	19.0	23.4	27.0	31.4	31.1	37.5	43.1	47.5	54.2	58.7	80.0	84.5
Volclay Medium	12.5	17.0	19.5	24.0	27.7	32.3	32.0	38.6	44.3	48.8	55.7	60.3	82.2	86.8
Granular														
Benseal	11.4	15.5	17.8	21.9	25.3	29.4	29.2	35.2	40.4	44.6	50.8	55.0	75.0	79.2
Wyo-bend No. 8	11.0	15.0	17.2	21.2	24.4	28.4	28.1	34.0	39.0	43.0	49.1	53.1	72.4	76.4
Wyo-bend No. 16	11.0	15.0	17.2	21.2	24.4	28.4	28.1	34.0	39.0	43.0	49.1	53.1	72.4	76.4
Slurry														
Baroid	2.7	3.7	4.2	5.2	6.0	6.9	6.9	8.3	9.5	10.5	12.0	13.0	17.7	18.7
Hi-yield	2.0	2.7	3.1	3.9	4.4	5.2	5.1	6.2	7.1	7.8	8.9	9.7	13.2	13.9
Wyo-bend	2.8	3.9	4.4	5.5	6.3	7.3	7.3	8.8	10.1	11.1	12.7	13.7	18.7	19.7
Volclay	2.6	3.5	4.0	4.9	5.7	6.6	6.6	7.9	9.1	10.0	11.5	12.4	16.9	17.8

Table 3.14 Drill Area 5 (Unconsolidated Water Wells Using Four and One-half Inch (4 1/2") Casing Diameter). Minimum Number of Bags of Grout Required in Annular Space (Ann.) or Open Hole (O.H.) for Sealing Casing with a Minimum Upper Grout Seal of Twenty Feet (20').

CASING OUTER DIAMETER 4 1/2" (4" NOMINAL) – APPLIES TO DRILLING AREA 5 ONLY

Type of Grout	Borehole Diameter (inches)			
	8 1/2		9	
	Ann.	O.H.	Ann.	O.H.
CEMENT				
Portland Type I	4.8	6.7	5.7	7.6
Portland Type III	4.8	6.7	5.7	7.6
BENTONITE				
Pellets				
1/2" Baroid Pellets	7.7	10.7	9.0	12.0
3/8" Baroid Pellets	8.1	11.3	9.5	12.7
1/4" Baroid Pellets	8.1	11.3	9.5	12.6
Wyo-Bend Tablets	8.6	11.9	10.0	13.3
Volclay 1/2"	8.7	12.0	10.1	13.5
Volclay 3/4"	8.9	12.4	10.4	13.9
Volclay 1/4"	9.2	12.8	10.8	14.4
Chips				
Baroid Hole Plug	8.2	11.4	9.6	12.8
Wyo-Bend Coarse	6.9	9.6	8.1	10.7
Wyo-Bend Medium	7.1	9.9	8.3	11.1
Volclay Coarse	7.6	10.6	8.9	11.9
Volclay Medium	7.8	10.9	9.2	12.2
Granular				
Benseal	7.2	9.9	8.4	11.1
Wyo-bend No. 8	6.9	9.6	8.1	10.7
Wyo-bend No. 16	6.9	9.6	8.1	10.7
Slurry				
Baroid	1.7	2.3	2.0	2.6
Hi-yield	1.3	1.7	1.5	2.0
Wyo-Bend	1.8	2.5	2.1	2.8
Volclay	1.6	2.2	1.9	2.5

Figure 3.1 All Drilling Areas.

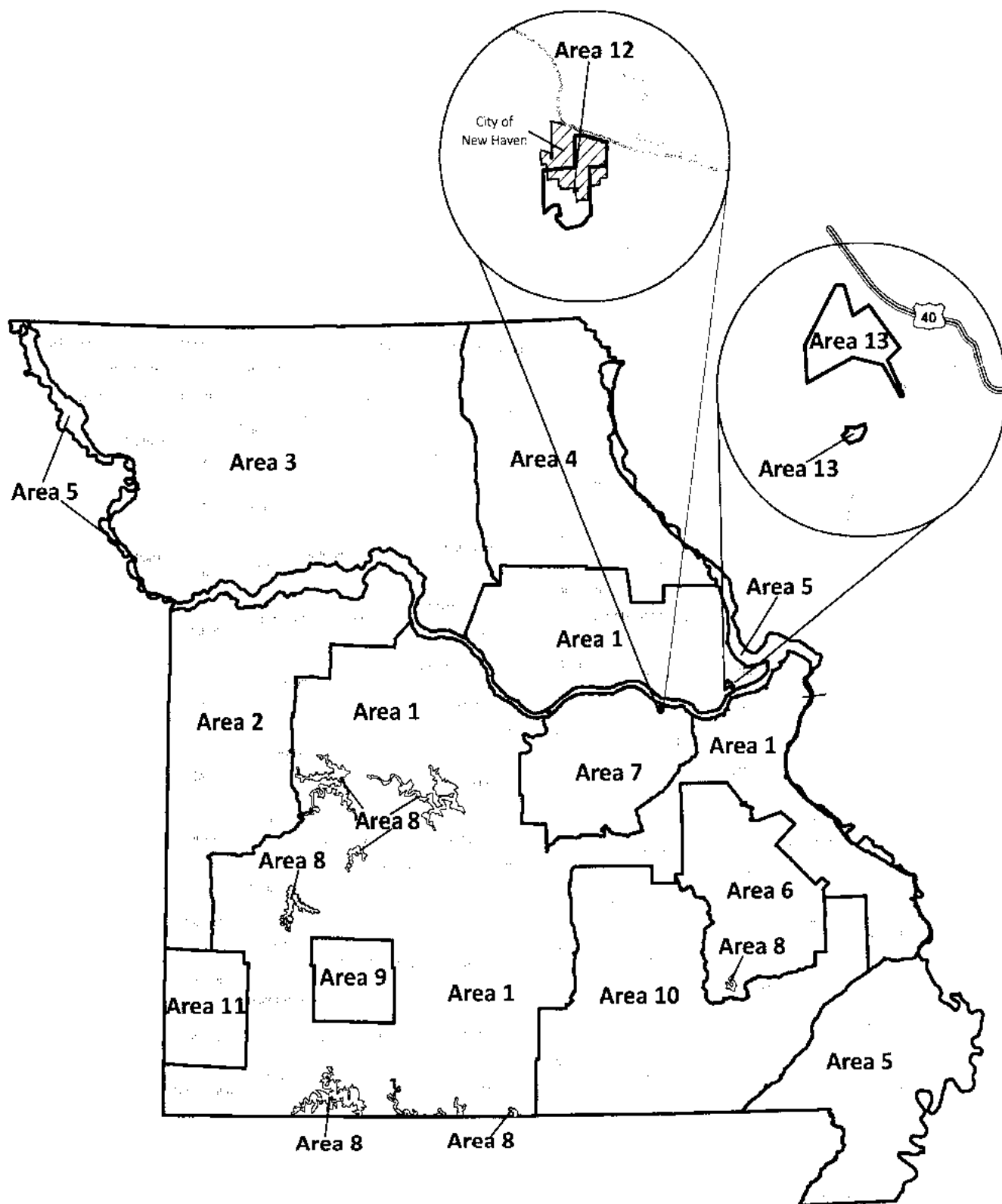


Figure 3.2 Drilling Areas 1, 7, 8, 9, and 11.

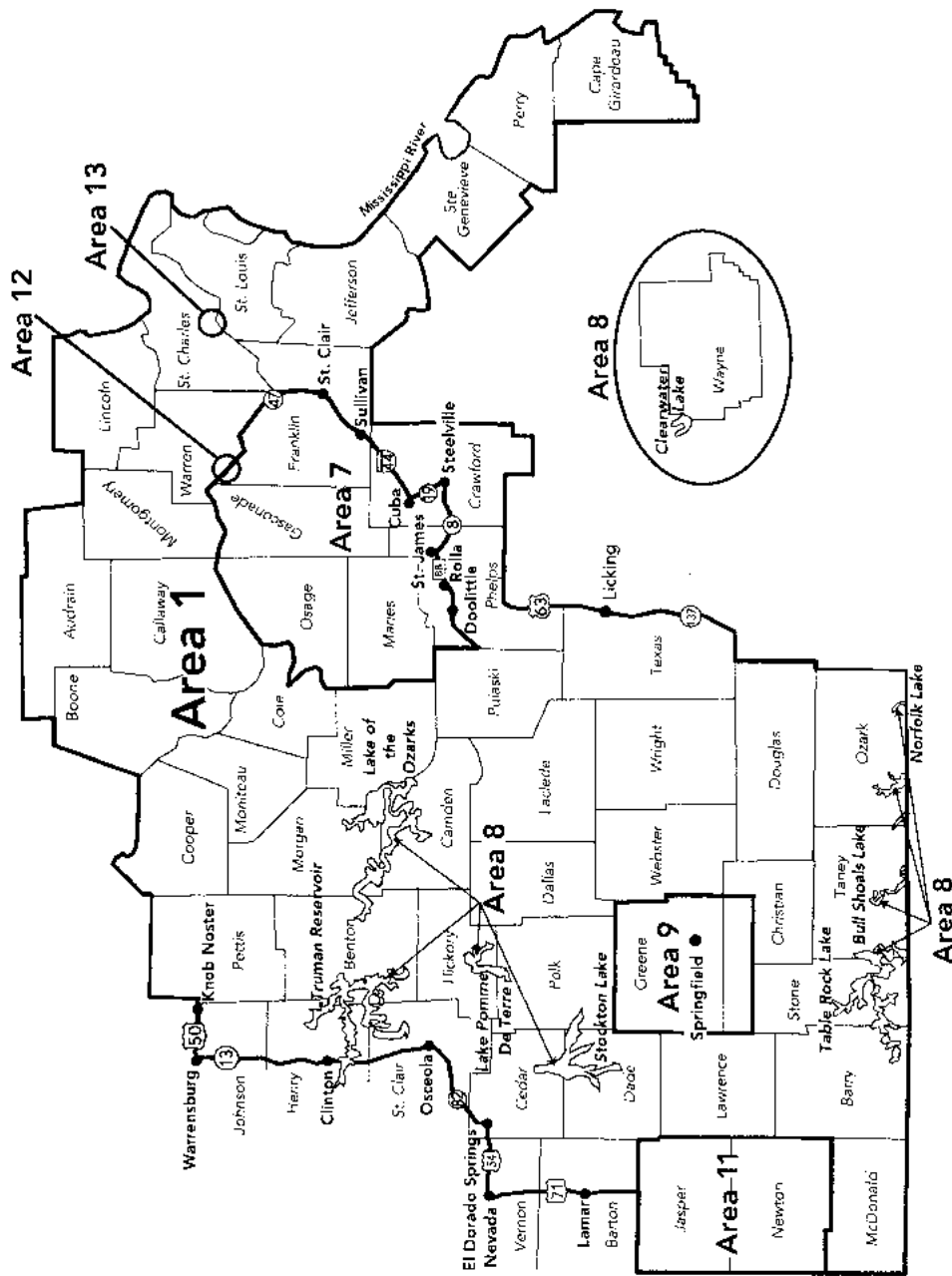


Figure 3.3 Drilling Area 2.

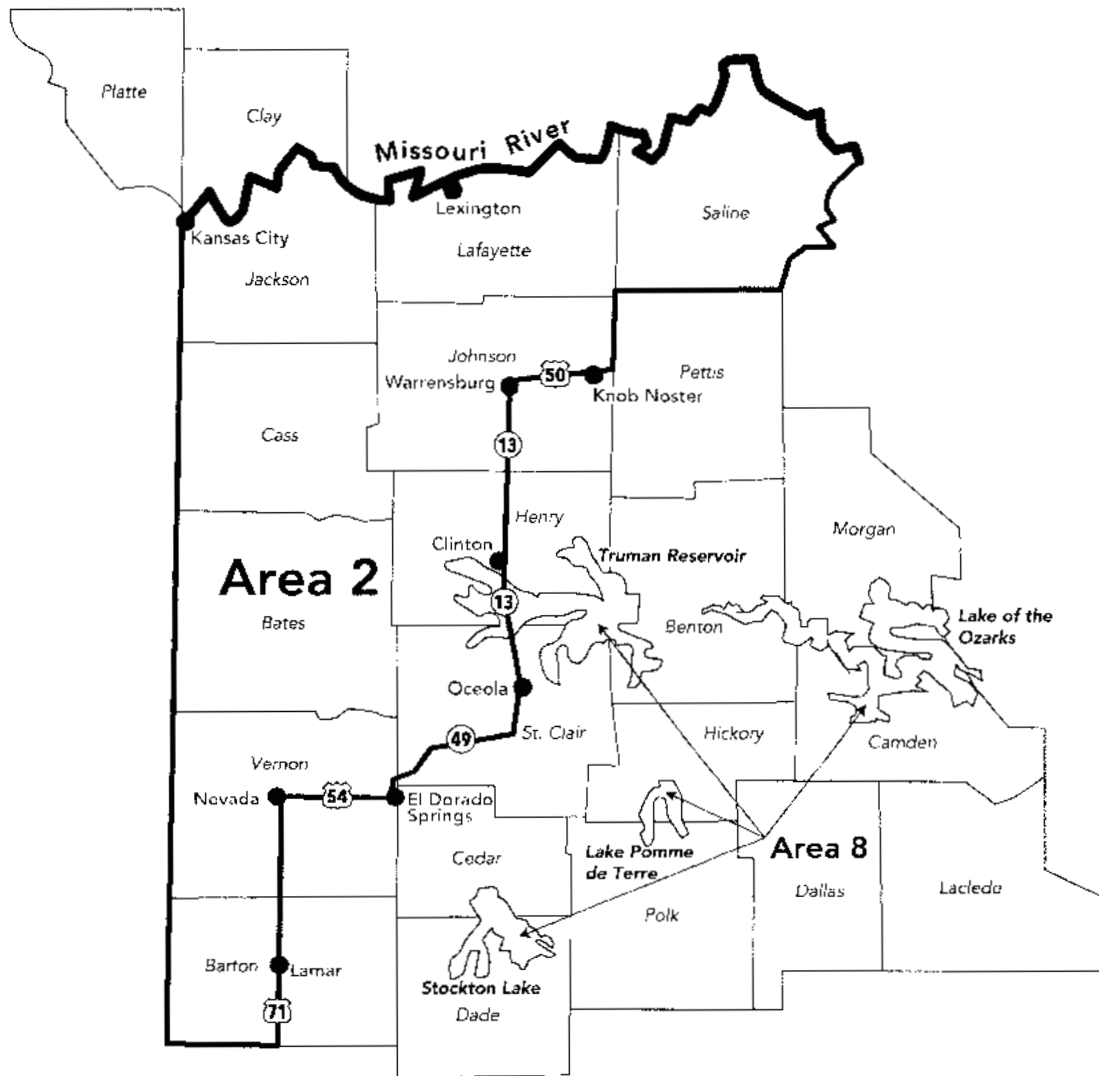


Figure 3.4 Drilling Area 3.



Figure 3.5 Drilling Area 4.

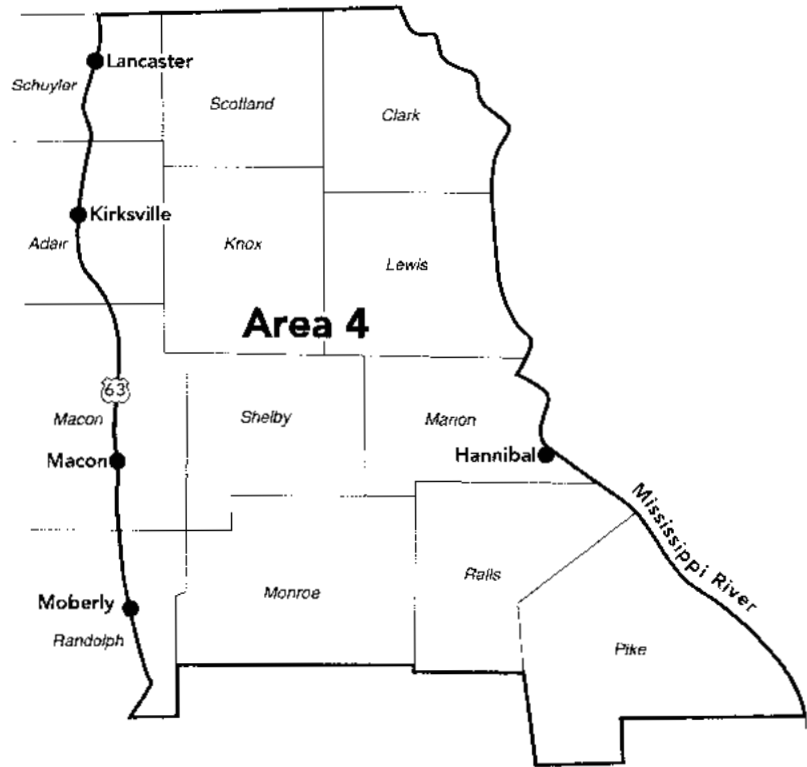


Figure 3.6 Drilling Area 5. This area includes the alluvial plains of the Missouri and Mississippi rivers.



Figure 3.7 Drilling Area 6.



Figure 3.8 Drilling Area 10.

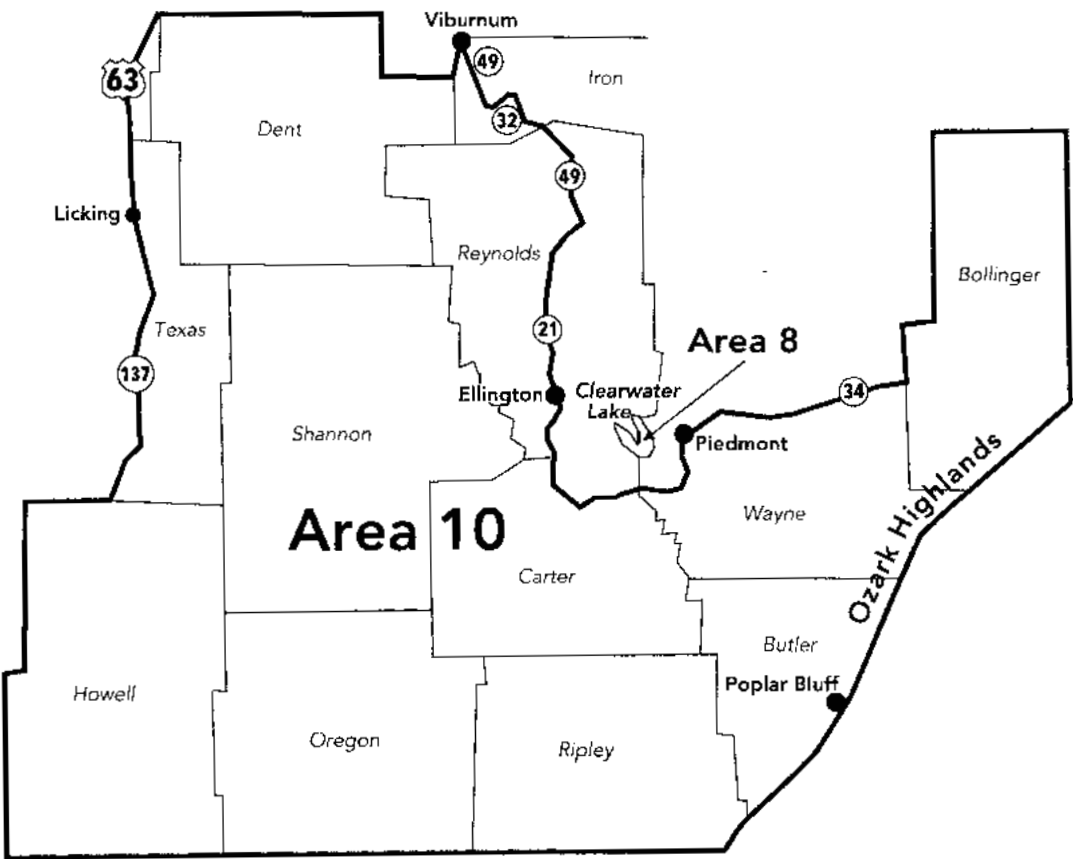


Figure 3.9 Drilling Area 12.

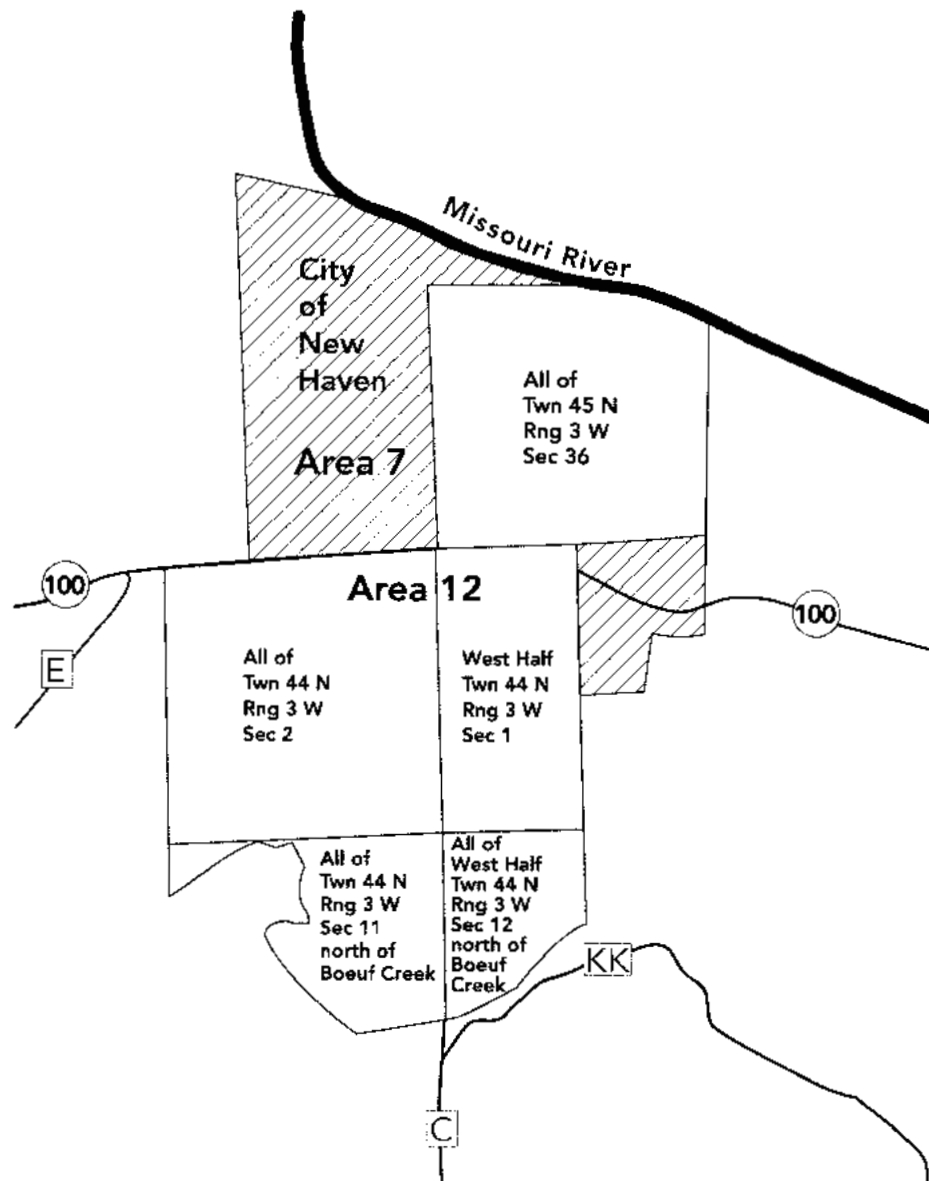
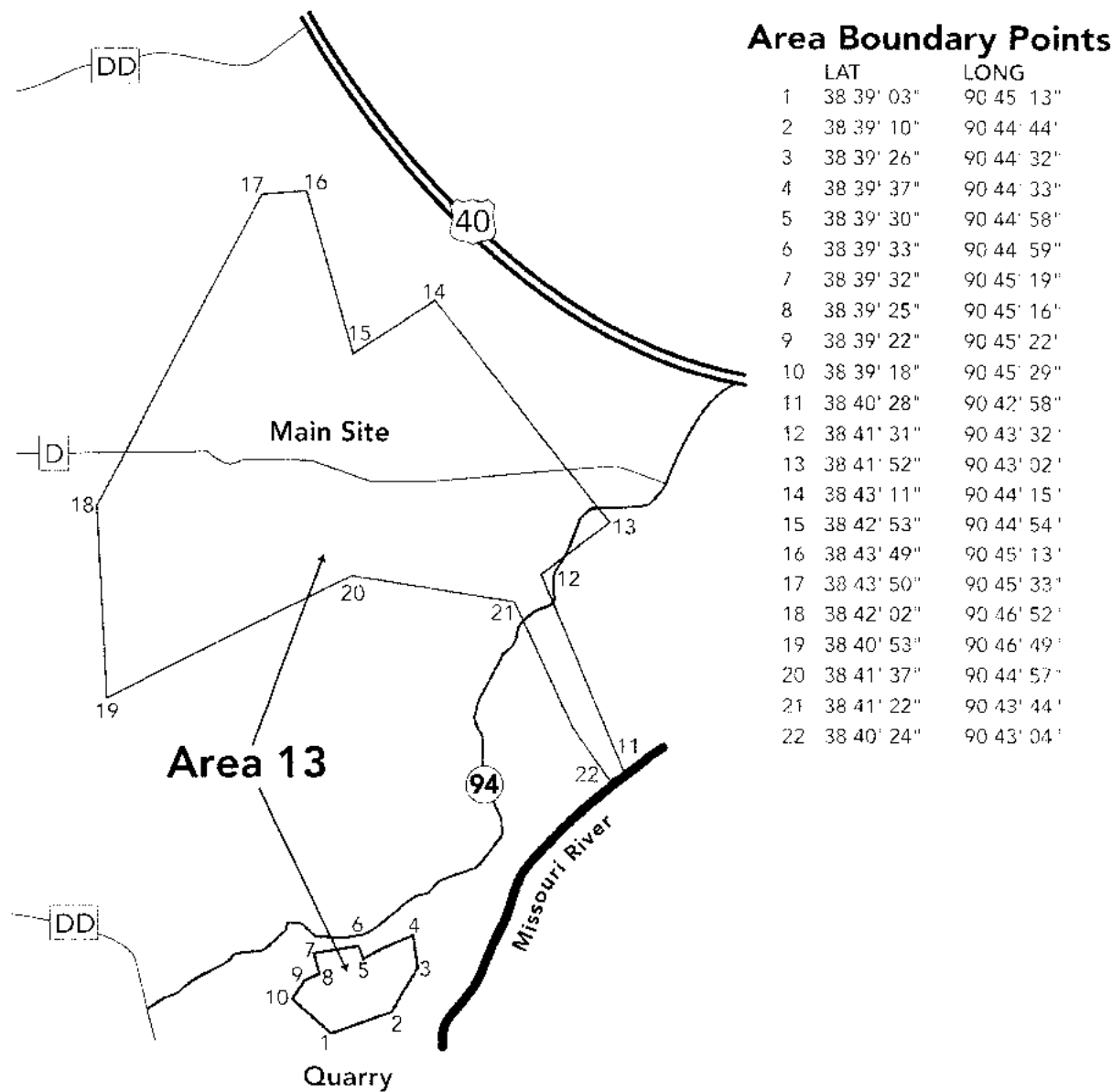


Figure 3.10 Drilling Area 13.



AUTHORITY: sections 256.606 and 256.626, RSMo [Supp. 1991] 2016. Original rule filed April 2, 1987, effective July 27, 1987. Emergency amendment filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Amended: Filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will cost private entities six hundred twenty-four dollars (\$624) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, 111 Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, 111 Fairgrounds Road, Rolla, MO 65401.

FISCAL NOTE

PRIVATE COST

I. RULE NUMBER

Rule Number and Name	10 CSR 23-3.090 Drilling Areas Sections (8), (9), and (11).
Type of Rulemaking	Amendment

II. SUMMARY OF FISCAL IMPACT

Estimate of the number of entities by class which would likely be affected by the adoption of the proposed rule:	Classification by types of the business entities which would likely be affected:	Estimate in the aggregate as to the cost of compliance with the rule by the affected entities:
The total average number of wells installed per year that are affected by this rule is 180. ¹³ Well owners are the affected entity. Well installation businesses will be indirectly affected and will pass the cost along to individual consumers.	1781 Water Well Drilling Private Well Owners	\$624

III. WORKSHEET

10 CSR 23-3.090(8) – Drilling Area 8

A well installed in this area must have casing installed to a depth determined by land surface elevation and lake depth.

Currently, liner may substitute for a portion of the required casing amount. In this scenario, 80 feet of casing is installed, and the remaining casing amount may be accomplished by using liner. The average casing depth requirement in this area is 165 feet⁷.

The following calculation shows the current liner materials cost charged to the well owner.

$(165 \text{ feet of liner} - 10 \text{ feet of liner}^1 = 155 \text{ feet of liner}) * (\$5/\text{feet}^4) = \$775$

$(2 \text{ rubber conical packers}) * (\$20/\text{packer}^2) = \$40$

$60 \text{ vertical feet of bentonite slurry}^3 = \21

Total material cost = \$836

To effectively protect groundwater, the proposed amendment will allow liner to substitute for a portion of the required casing amount when plastic liner cannot be used due to geologic reasons and steel casing is used. In this scenario, when plastic casing cannot be used, 80 feet of steel casing is installed and the remaining casing amount may be accomplished by using liner. The amendment requires the use of ribbed K-Packers and limits the grout materials that can be used. The following calculation shows the increased cost.

(165 feet of liner – 10 feet of liner¹ = 155 feet of liner)*(\$5/feet⁴) = \$775
(2 ribbed K-Packers)*(\$40/packer³) = \$80
60 vertical feet of cement grout⁵ = \$60
Total material cost = \$915

This results in an average of \$79 per well increase.
\$915-\$836 = \$79

The average price increase per well multiplied by the average number of wells installed in this area per year with liners equals the total cost increase.

(\$79)*(50 wells¹⁰) = \$3,950

10 CSR 23-3.090(9) – Drilling Area 9

A well installed in this area must have casing installed to a depth determined by quarter section.

Currently, liner may substitute for a portion of the required casing amount. In this scenario, 100 feet of steel casing must be installed, and the remaining casing amount may be accomplished by using liner. The average casing depth requirement in this area is 225 feet⁸.

The following calculation shows the current liner materials cost charged to the well owner.

(225 feet of liner – 10 feet¹ = 215 feet of liner)*(\$5/feet⁴) = \$1075
(2 rubber conical packers)*(\$20/packer²) = \$40
60 vertical feet of the most inexpensive allowable grout (bentonite slurry)⁵ = \$21
Total material cost = \$1,136

To effectively protect groundwater, the proposed amendment will allow liner to substitute for a portion of the required casing amount when plastic liner cannot be used due to geologic reasons and steel casing is used. In this scenario, when plastic casing cannot be used, 100 feet of steel casing is installed and the remaining casing amount may be accomplished by using liner. The amendment requires the use of ribbed K-Packers and limits the grout materials that can be used.

The following calculation shows the increased cost.

(225 feet of liner – 10 feet¹ = 215 feet of liner)*(\$5/feet¹) = \$1,075
(2 ribbed K-Packers)*(\$40/packer³) = \$80
60 vertical feet of cement grout⁵ = \$60
Total material cost = \$1,215

This results in an average of \$79 per well increase.
\$1,215-\$1,136 = \$79

The average price increase per well multiplied by the average number of wells installed in this area per year with liners equals the total cost increase.

(\$79)*(115 wells¹¹) = \$9,085

10 CSR 23-3.090(11) – Drilling Area 11

A well installed in this area must have casing installed to a depth determined by quarter section.

Currently, liner may substitute for a portion of the required casing amount. In this scenario, 100 feet of steel casing must be installed, and the remaining casing amount may be accomplished by using liner. The average casing depth requirement in this area is 450 feet⁹.

The following calculation shows the current liner materials cost charged to the well owner.

$$(450 \text{ feet of liner} - 10 \text{ feet}^1 = 440 \text{ feet of liner}) * (\$5/\text{feet}^4) = \$2,200$$

$$(2 \text{ rubber conical packers}) * (\$20/\text{packer}^2) = \$40$$

$$60 \text{ vertical feet of the bentonite slurry}^5 = \$21$$

$$\text{Total material cost} = \$2261$$

To effectively protect groundwater, the proposed amendment will allow liner to substitute for a portion of the required casing amount when plastic liner cannot be used due to geologic reasons and steel casing is used. In this scenario, when plastic casing cannot be used, 100 feet of steel casing is installed and the remaining casing amount may be accomplished by using liner. The amendment requires the use of ribbed K-Packers and limits the grout materials that can be used.

$$(450 \text{ feet of liner} - 10 \text{ feet}^1 = 440 \text{ feet of liner}) * (\$5/\text{feet}^4) = \$2,200$$

$$(2 \text{ ribbed K-Packers}) * (\$40/\text{packer}^3) = \$80$$

$$380 \text{ vertical feet of cement grout}^6 = \$360$$

$$\text{Total material cost} = \$2,640$$

This results in an average of \$380 per well increase.

$$\$2640 - \$2,261 = \$379$$

The average price increase per well multiplied by the average number of wells installed in this area per year with liners equals the total cost increase.

$$(\$379) * (15 \text{ wells}^{12}) = \$5,685$$

$$\text{Totals for 10 CSR 23-3.090}$$

The total cost increase per year for the proposed rule changes in Drilling Areas 8, 9, and 11 is shown in the following calculation.

$$\$3,950 + \$9,085 + \$5,685 = \$18,720$$

This cost can be distributed over the life of the rule (expected life of well) to determine the aggregate cost of the proposed rule.

$$(\$18,720)/(30 \text{ years}^{14}) = \$624$$

\$624 is the aggregate cost increase of wells, constructed with liners, installed in Drilling Areas 8, 9, and 11 of 10 CSR 23-3.090 over the life of the proposed rule. Note that not all wells installed in these areas use liners. Annually, an average of 50.7% (180/355*100%) of wells installed in these areas are affected by this rule.

IV. ASSUMPTIONS AND FOOTNOTES

¹ Generally 10 feet less liner is installed to account for surface apparatus clearance.

Table 1. Applicable packer costs.*

Conical packer	K-Packer	Liner
\$20 ²	\$40 ³	\$5/feet ⁴

*Determined by averaging the packer material cost from six vendors and liner material cost charged by six well installation businesses in the affected Drilling Areas.

Table 2. Applicable grout material costs.*

Grout price for 60 vertical feet ⁵			
Grout	price per unit	volume (units) needed for 60'	total price
cement	12	5	60
coated pellets	85	9	765
chips	9.5	8	76
granules	9.5	7	66.5
slurry	10.5	2	21
Grout price for 380 vertical feet ⁶			
cement	12	30	360
coated pellets	85	50	4250

*Determined by multiplying the allowable grout material unit price by the number of units needed to achieve the required 60 foot vertical seal giving the volumetric grout material cost.

Table 3. Average Required Casing by Drill Area.

Drill Area	Average Required Casing Depth
8*	165 feet ⁷
9**	225 feet ⁸
11**	450 feet ⁹

* Average required casing depth determined by averaging all issued casing points.

** Average required casing depth determined by taking average quarter section casing depth requirement for all quarter sections in area.

Table 4. Average Number of Wells with Liners Installed by Drill Area.*

Drill Area	Average Number of Wells Installed With Liners per Year
8	50 ¹⁰
9	115 ¹¹
11	15 ¹²
Total	180 ¹³

* Determined by averaging totals from 2015, 2016, and 2017.

¹⁴ Average life of the well is equal to the average life of the rule (i.e., 30 years)

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—Division of Geology and Land Survey
Chapter 3—Well Construction Code

PROPOSED RECISSION

10 CSR 23-3.100 Sensitive Areas. This rule set specific additional construction standards for sensitive areas that had been designated on the basis of either naturally occurring problems caused by unique groundwater chemistry, anthropogenic contamination, or because they were located in a fragile groundwater environment that was experiencing rapid population growth or urbanization.

PURPOSE: This rule is being rescinded and the substantive requirements are being incorporated into 10 CSR 23-3.090 Drilling Areas (formerly Regionalization) to clearly state the differences in water well drilling requirements based on geographic, geologic, hydrologic, and anthropogenic differences throughout Missouri.

AUTHORITY: sections 256.606 and 256.626, RSMo 2000. Original rule filed April 2, 1987, effective July 27, 1987. For intervening history, please consult the *Code of State Regulations*. Rescinded: Filed June 27, 2018.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: The proposed rescission will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rescission with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—[Division of Geology and Land Survey]
Well Installation
Chapter 3—Water Well Construction Code

PROPOSED AMENDMENT

10 CSR 23-3.110 Plugging of Water Wells. The board is amending the division name, chapter name, rule purpose, sections (1)–(5) and removing sections (6) and (7). The board is also removing Figures 9 through 11.

PURPOSE: This amendment clarifies how to plug a well based on well type.

PURPOSE: This rule establishes [criteria for the proper plugging procedures to be followed when abandoning] standards for plugging a water well. [Plugging procedures for monitoring wells are contained in 10 CSR 23-4.080, for heat pump wells in 10 CSR 23-5.080 and for test holes in 10 CSR 23-6.050.]

[Editor's Note: This rule was originally filed as part of 10 CSR 23-3.020 General Protection of Groundwater. It is proposed as a separate rule because of added emphasis given

to abandonment procedures in the amendment to the law.

(1) Any well which is to be abandoned must be plugged in accordance with these rules. If a well has been determined to present a threat to groundwater, the division may order that the well be permanently plugged. If a well is in such a state of disrepair (such as the pump has been removed or the water line disconnected) that continued use for purposes of obtaining groundwater is impractical and the well has not been in use for a period of two (2) years or more, the division may order that the well be permanently plugged.

(2) Permanent Abandonment of Wells.

(A) Plugging the Well.

1. A well that is to be permanently abandoned shall be disconnected from the water distribution system and the hole filled to prevent contaminating materials from entering the subsurface water-bearing formations and groundwater from one (1) aquifer mixing with that of another aquifer. Bentonite or cement grout shall be used for grouting material. If the well is so large that the use of these materials is not practical, the division will determine a proper plugging schedule. All materials, debris and obstructions that may interfere with plugging operations shall be removed from the well. Liner pipe shall be removed or perforated when necessary to assure placement of an effective plug.

2. The division must be consulted for instruction in case of abandonment of a contaminated well or where there is a question of proper procedure. Sampling of the fluids in the well may be required. A permitted well installation or pump installation contractor must be utilized to plug the well.

(B) An abandoned well shall be plugged by one (1) of the following methods in this section in accordance with the materials penetrated, in such a manner as to prevent it from acting as a channel for pollution. A report of the method of plugging shall be filed with the division on a registration report form that is provided by the division.

(C) Plugging requirements contained in 10 CSR 23-3.010–10 CSR 23-3.100 do not pertain to bedrock irrigation wells and public water supply wells which include community, noncommunity and nontransient noncommunity type wells. Plugging requirements for these types of wells will be determined on a case-by-case basis by the division and must be performed by a permitted contractor, and may be more stringent than those for domestic and multifamily wells.

1. Hand dug wells and bored wells no deeper than eighty feet (80'). To plug this type of well, the following steps must be followed (see Figure 9):

A. Remove all pumps, pipe, debris and surface coverings or concrete cap;

B. Push in top three feet (3') of well lining. Lining may be composed of rock, brick or tile. If lining is composed of any other material consult the division for further instructions;

C. Fill well to within three feet (3') from the surface with clean fill such as gravel, sand, varied sized agricultural lime or other approved material;

D. Disinfect fill material. If there is water in the well, chlorine must be added to bring its concentration to at least one hundred (100) parts per million (ppm) (see Table 1 in 10 CSR 23-3.050). As the fill material is poured into the well, it is disinfected as it comes in contact with the chlorinated water. If there is no water in the well to be plugged, disinfect the fill material before it is placed into the well;

E. Fill the remaining hole with clay or clay-rich soil. Soil should be mounded slightly at the top to help offset settling; and

F. Submit the registration report form and fee to the

division.

2. Wells completed in unconsolidated deposits. This type of well includes alluvial wells, glacial drift wells and nonbedrock wells. To plug this type of well, the following steps must be followed:

A. Remove all pumps, pipe and debris from well;

B. Dig around casing and remove top three feet (3') of casing. The remaining hole must be at least two feet (2') in diameter larger than the existing casing (see Figure 10);

C. Fill well from total depth to fifty feet (50') from surface with clean fill such as gravel, sand, varied sized agricultural lime or other approved material;

D. Disinfect fill material. If there is water in the well, you must add chlorine to the water bringing it to a concentration of at least one hundred (100 ppm) (see Table 1 in 10 CSR 23-3.050). As the fill material is poured into the well, it is disinfected as it comes in contact with the chlorinated water. If there is no water in the well to be plugged, disinfect the fill material before it is placed into the well;

E. Place a grout plug that fills the upper fifty feet (50') of casing and extends into the larger excavated area, at least one foot (1'). In agricultural or yard settings the remaining hole above the grout plug must be filled with soil. In other settings, the remaining hole above the grout plug may be filled with clean fill if the well site is to be paved; and

F. Submit registration report form and fee to the division.

3. Wells completed in bedrock. This type of well includes any domestic well that produces water from bedrock aquifers (see Figure 11). To plug this type of well, the following steps must be followed:

A. Remove all pumps, pipe and debris from well. Any liner must be removed or perforated if possible;

B. Dig around casing and remove top three feet (3') of casing. The remaining hole must be at least two feet (2') in diameter larger than the existing casing;

C. Fill well from total depth to fifty feet (50') below bottom of casing with clean fill such as gravel, sand, varied sized agricultural lime or other approved fill material;

D. Disinfect fill material. If there is water in the well, you must add chlorine to the water bringing it to a concentration of at least one hundred (100) ppm (see Table 1 in 10 CSR 23-3.050). As the fill material is poured into the well, it is disinfected as it comes in contact with the chlorinated water. If there is no water in the well to be plugged, disinfect any fill material used before it is placed into the well;

E. Place cement or bentonite from a point fifty feet (50') below the bottom of the casing to two feet (2') from the surface making sure the grout extends into the excavated area at least one foot (1'). If the water level is above a point fifty feet (50') below the bottom of the casing, then bentonite chips must be used or the cement or bentonite slurry must be emplaced through a tremie pipe lowered through the water level to the top of the fill. Under no circumstances may cement or bentonite slurry be poured through large columns of water without the use of a tremie pipe (see paragraph (2)(C)6. for alternative cement plugging technique);

F. May plug the well, if the well has one hundred fifty feet (150') or more of casing, by filling the well with clean aggregate to a point fifty feet (50') below the bottom of the casing, placing a grout plug from this point extending up into the casing thirty feet (30'). From this point to within fifty feet (50') of the surface, clean aggregate fill may be used. From fifty feet (50') to two feet (2') must be filled with grout making sure the grout extends into the excavated area at least one foot (1');

G. Cut casing off at top of bedrock, if bedrock is

encountered when digging around the casing, and fill remaining hole with cement slurry. In agricultural or yard settings, the plug must terminate at least two feet (2') below the finished surface grade and the remaining hole filled with soil. In other settings, the remaining hole may be filled with clean fill if the well site is to be paved; and

H. Submit registration report form and fee to division.

4. For those wells which casing depth, water level and total depth are not known and cannot be determined, plugging instructions will be determined on a case-by-case basis and may be more stringent.

5. As clean fill is being placed into a well, periodic measurements should be taken to ensure that the fill does not reach a point closer than fifty feet (50') below the bottom of the existing casing. If fill is placed above this point, plugging schedules will be determined by the division and may result in removal of fill material.

6. When plugging a well that contains water that is above a point of fifty feet (50') below the bottom of the casing or liner, whichever is deeper, cement slurry may be poured into the well if a tremie pipe is placed in the well to near the bottom and acts as a conduit for the water to escape through as the cement slurry is poured into the well casing from the surface. The cement slurry must be poured in one (1) continuous operation. Mixing small batches and pouring is not permitted.

7. The flow in a flowing well shall be confined, if possible, and the well plugged in accordance with well plugging requirements supplied by the division which will be determined on a case-by-case basis. Proper judgment shall be exercised in the feasibility of plugging flowing wells. In some cases the confining formation may have been so badly disturbed that plugging may only cause the flow to discharge in a less appropriate location. In other situations, the flow may have eroded so much material that the landscape has taken on the appearance of a natural spring. The plugging in this case may be impractical, if not impossible.

(3) Owners Responsibility for Plugging Well. The owner shall be responsible for the permanent plugging of an abandoned well except when the permittee improperly locates, constructs or completes the well. The permittee shall then be responsible for the plugging of the well.

(4) Wells Abandoned by Landowners. Wells abandoned by landowners after August 28, 1991, shall be plugged or cause to be plugged, in accordance with this rule. Landowners may plug their own wells located on property they own or lease, if the wells were intended for use only in single-family houses which are their permanent residences, or were intended for use only for farming purposes on their farms, and where the waters that were produced were not intended for use by the public or in any residence other than their own. If a landowner pays someone to assist with the plugging of the well, that person must hold a current Missouri well installation contractor permit or Missouri pump installation contractor permit except as stated in 10 CSR 23-1.090(2) concerning hand dug wells. If the division makes a finding that certain unusual conditions exist at a well that is to be plugged, the division may require that the well be plugged by a permitted well installation contractor or a permitted pump installation contractor. Unusual conditions exist at a well that is to be plugged if the total depth, amount of casing and water level are not known; a liner is in the well; foreign objects are stuck in the well; the well is contaminated with pollutants other than bacteria; or other conditions determined by the division on a case-by-case basis.

(5) A permittee or landowner who permanently abandons any well that is removed from service shall report the abandonment to the division on a registration report form provided by the division. A permittee or landowner shall report to the division any unplugged abandoned wells existing on his/her property (landowner) or property on which a permittee is hired to perform well drilling repair or pump installation.

(6) All wells may be plugged by filling the well via tremie or pressure grouting with cement slurry, bentonite or bentonite slurry from total depth to two feet (2') from the surface, if this method exceeds other minimum standards.

(7) If the division finds that certain conditions for high potential of groundwater contamination exist at a well, the division may require that a permitted well installation contractor or pump installation contractor be contracted to plug the well.]

(1) General Plugging Requirements for Water Wells.

(A) Abandoned wells shall be plugged in accordance with these rules pursuant to sections 256.603(1) and 256.615, RSMo. If a well presents a contamination threat to groundwater, the department may order that the well be plugged.

(B) A permittee shall report to the department any unplugged abandoned wells existing on property where the permittee performed work under these rules.

(C) The well owner shall be responsible for plugging abandoned wells or causing the well to be plugged, except as follows:

1. When the permittee improperly locates, constructs, or completes a well, then the permittee is be responsible for plugging the well unless the department has set a timeframe for remediation of the well;

2. A dry hole shall be plugged within thirty (30) days and a plugging registration record submitted. A certification record is not required; or

3. Wells that produce saline water shall be plugged within thirty (30) days and a plugging registration record submitted. A certification record is not required.

(2) General Plugging Methods.

(A) A well that is to be plugged shall be disconnected from the water distribution system and the borehole sealed to prevent contaminants from entering an aquifer or prevent aquifer mixing.

(B) Contaminated wells shall be plugged by a permitted contractor. The department shall be consulted for plugging specifications. Groundwater sampling may be required.

(C) Wells contaminated by bacteria only may be plugged by the well owner.

(D) Wells that have an unknown casing depth shall be plugged full length with grout materials pursuant to 10 CSR 23-3.110(2)(E).

(E) Grout Materials—

1. Cement slurry;
2. Bentonite;
3. Bentonite slurry; or
4. Other approved grout.

(F) Grout Placement Methods—

1. Tremie;
2. Reverse tremie;
3. Gravity; or
4. Pressure.

(G) The top portion of the casing shall be removed and the excavated area filled by well type pursuant to 10 CSR 23-3.110(3).

(H) New or existing wells that have unusual conditions, includes but not limited to, contamination, a liner, a foreign object, or

pump stuck in the borehole shall be plugged full length by a permitted contractor using cement, emplacing the cement grout by one (1) of the following methods: tremie, tremie pressure, or reverse tremie. Alternate plugging methods may be used upon advanced written approval by the department.

(3) Domestic and Multifamily Water Well Plugging Requirements.

(A) Hand dug and augered wells less than eighty feet (<80') in depth may be plugged by the landowner or a non-permitted person.

1. Remove the pump, pipe, debris, and surface covering.

2. Remove at a minimum the top one foot (1') of well lining unless the well is located in an agricultural setting where the removal of well lining shall be three feet (3') below ground surface. Lining may be composed of rock, brick, tile, tin, or clay pipe.

3. Disinfect the well. If water is in the well, add chlorine to the water pursuant to 10 CSR 23-3.050(7). If no water is in the well, disinfect the fill material as it is placed into the well.

4. Fill the well with clean fill from total depth to one foot (1') from ground surface or if in an agricultural setting three feet (3') from ground surface.

5. Fill the remaining hole with clay or clay-rich soil. Soil should be mounded slightly to help offset settling.

(B) Unconsolidated material wells.

1. Remove the pump, pipe, and any debris from the well.

2. Remove the top two feet (2') of casing. If well is located in an agricultural setting remove the top three feet (3') of casing below ground surface. Excavate the area at least two feet (2') in diameter larger than the existing casing. If the well casing is surrounded by a concrete pad or asphalt, the casing may be cut off flush.

3. Disinfect the well. If water is in the well, add chlorine to the water pursuant to 10 CSR 23-3.050(7). If no water is in the well, disinfect the fill material as it is placed into the well.

4. Add clean fill.

A. Wells less than or equal to two hundred feet ($\leq 200'$) total depth, add clean fill from total depth to approximately twenty feet (20') below ground surface.

B. Wells greater than two hundred feet (200') total depth, add clean fill from total depth to approximately fifty feet (50') below ground surface.

5. Add grout plug.

A. Wells less than or equal to two hundred feet ($\leq 200'$) total depth, add grout from top of clean fill to one foot (1') below ground surface in yard or non-agricultural setting or three feet (3') below ground surface in an agricultural setting. Grout plug shall total twenty feet (20').

B. Wells greater than two hundred feet ($>200'$) total depth, add grout from top of fill to one foot (1') below ground surface in yard or non-agricultural setting or three feet (3') below ground surface in agricultural setting. Grout plug shall total fifty feet (50').

6. Add soil or clean fill.

A. Completely fill the excavated area above the grout plug with soil or clean fill.

B. If the well casing is surrounded by a concrete pad or asphalt, fill the top one foot (1') of casing above the grout plug with cement grout or quick-setting concrete.

7. If the well casing and screen are removed from the well, native material is allowed to collapse into the borehole; fill any remaining borehole with grout and add a minimum one foot (1') soil cap in a yard or non-agricultural setting or a three foot (3') soil cap in an agricultural setting.

(C) Bedrock wells.

1. Remove the pump, pipe, liner, and debris from well. If any item is left in the well, see 10 CSR 23-3.110(2)(H) for plugging requirements.

2. Remove the top two feet (2') of casing. If well is located in an agricultural setting remove the top three feet (3') of casing below ground surface. Excavate the area at least two feet (2') in diameter larger than the existing casing. If the well casing is surrounded by a concrete pad or asphalt, the casing may be cut off flush. If the top two feet (2') of casing cannot be removed due to encountering bedrock or hard impervious material when digging around the casing, cut the casing flush with the top of bedrock or impervious material.

3. Disinfect the well. If water is in the well, add chlorine to the water pursuant to 10 CSR 23-3.050(7). If no water is in the well, disinfect the fill material as it is placed into the well.

4. Add clean fill. If the well is not filled full length with grout, then fill the well from total depth to fifty feet (50') below the bottom of the casing with clean fill.

5. Add a grout plug. Place a grout plug on top of clean fill from a point fifty feet (50') below the bottom of the casing completely filling the casing to one foot (1') below ground surface.

6. Add soil or clean fill. Fill the excavated area above the grout plug and with soil. Clean fill may be used to fill the excavated area above the grout plug if the well site is to be paved. If the well casing is surrounded by a concrete pad or asphalt, then fill the top one foot (1') of casing with cement grout or quick-setting concrete.

7. For a well with greater than eighty feet (>80') of casing the well may be plugged as follows.

A. Add clean fill. Fill the well with clean fill from total depth to fifty feet (50') below the bottom of the casing.

B. Add a lower grout plug. The lower grout plug shall extend from fifty feet (50') below the bottom of the casing to at least thirty feet (30') into the casing.

C. Add clean fill. Clean fill may be added on top of the lower grout plug and extend to fifty feet (50') below ground surface.

D. Add an upper grout plug. The upper grout plug shall extend from the top of clean fill (fifty feet (50') below ground surface) to one foot (1') below ground surface.

E. Add soil or clean fill pursuant to 10 CSR 23-3.110(3)(C)6.

8. For a well that has greater than one hundred feet (>100') of standing water, the grout plug shall be emplaced by one (1) of the following methods: tremie, tremie pressure, reverse tremie, or gravity. If the gravity method is used only bentonite chips or pellets are allowed and shall be added slowly to avoid bridging. For reverse tremie, pour the cement slurry in one (1) continuous operation. For all methods, the tremie pipe shall be no greater than twenty feet (20') from the bottom of the well or the top of the fill material.

9. If the borehole does not have casing, the borehole may be filled with clean fill from total depth to fifty feet (50') below ground surface. From fifty feet (50') to within one foot (1') of ground surface, the borehole shall be filled with grout. Fill the top one foot (1') with soil or clean fill pursuant to 10 CSR 23-3.110(3)(C)6.

(4) High Yield Well Plugging Requirements.

(A) Bedrock Wells.

1. All high yield wells may be plugged using the following method without prior approval from the department.

A. Remove all materials from the well prior to plugging.

B. Cut the casing two feet (2') below ground surface or flush with bedrock if encountered. If the well is located in an agricultural setting remove the top three feet (3') of casing below ground surface.

C. Disinfect the well. If water is in the well, add chlorine to the water pursuant to 10 CSR 23-3.050(7).

D. Fill the well full length from total depth to the top of casing with cement slurry using one (1) of the tremie or reverse

tremie methods.

E. Fill the remaining hole above the cut off casing with soil or fill material.

2. Other methods including the use of fill material may be used upon receiving advanced written approval by the department.

(B) Unconsolidated wells.

1. Wells two hundred feet or less ($\leq 200'$) in total depth may be plugged as follows:

A. Remove all materials prior to plugging;

B. Cut the casing two feet (2') below ground surface. If well is located in an agricultural setting remove the top three feet (3') of casing below ground surface;

C. Fill the well from total depth to twenty feet (20') from surface with disinfected clean fill;

D. Plug the upper twenty feet (20') with bentonite or cement grout; and

E. Fill the remaining hole above the cut off casing with soil or fill material.

2. Wells greater than two hundred feet (>200') total depth may be plugged pursuant to 10 CSR 23-3.110(3)(B).

3. Other plugging materials and methods may be used upon receiving advanced written approval by the department.

(5) Inactive Water Wells may remain unplugged for a period no longer than five (5) years from the date the well became inactive provided the well owner obtains written approval from the department.

(A) Certified wells. Upon approval of inactive water well status, the pump must be removed and the wellhead provided with a permanent steel plate welded or a PVC cap glued. At the end of the five (5) year period, the well is considered abandoned and shall be plugged if not in service pursuant to 10 CSR 23-3.110.

(B) Noncertified wells. Prior to approval of inactive water well status, the following shall be completed:

1. The well owner or permitted pump installation contractor shall remove the pump;

2. Allow the department to inspect the well by use of a down-hole camera;

3. Protect the wellhead by a permanent steel plate welded or a PVC cap glued; and

4. The well casing length shall meet the construction requirement for the drill area the well is located in.

(C) The department will deny the request for inactive status if any of the requirements listed under 10 CSR 23-3.110(4)(B) are not met, the well does not meet minimum construction standards, or the well is found to be in a state of disrepair.

1. The well owner may reconstruct the well to meet minimum construction standards. Once the reconstruction report is approved, the well owner may reapply for inactive well status.

2. If the well is not operational at the end of the five (5) year period, the well is considered abandoned and shall be plugged if not in service pursuant to 10 CSR 23-3.110.

AUTHORITY: sections 256.606, 256.614, 256.615, and 256.626, RSMo [Supp. 1991] 2016. This rule was previously filed as 10 CSR 23-3.020(3)-(9). Emergency rule filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Original rule filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed July 13, 1994, effective Jan. 29, 1995. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, 111 Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, 111 Fairgrounds Road, Rolla, MO 65401.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—Division of Geology and Land Survey
Chapter 4—Monitoring Well Construction Code**

PROPOSED RESCISSION

10 CSR 23-4.010 Definitions. This rule specifically defined words used in Chapter 4 concerning monitoring wells, otherwise the definitions contained in 10 CSR 23-1.010 applied.

PURPOSE: This rule is being rescinded and substantive information is being incorporated into 10 CSR 23-1.010 Definitions.

AUTHORITY: sections 256.603, 256.606, and 256.626, RSMo 2000. Emergency rule filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Original rule filed Aug. 17, 1993, effective March 10, 1994. For intervening history, please consult the *Code of State Regulations*. Rescinded: Filed June 27, 2018.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed rescission will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rescission with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, 111 Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, 111 Fairgrounds Road, Rolla, MO 65401.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—Division of Geology and Land Survey
Chapter 4—Monitoring Well Construction Code**

PROPOSED RESCISSION

10 CSR 23-4.020 Certification and Registration for Monitoring Wells. This rule set required standards for certification report form submittal.

PURPOSE: This rule is being rescinded and substantive information is being incorporated into a single new proposed rule 10 CSR 23-2.020 Certification and Registration.

AUTHORITY: sections 256.606, 256.614, and 256.626, RSMo 2000. Emergency rule filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Original rule filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed Nov. 1, 1995, effective June 30, 1996.

Amended: Filed Nov. 18, 2010, effective July 30, 2011. Rescinded: Filed June 27, 2018.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: The proposed rescission will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rescission with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, 111 Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, 111 Fairgrounds Road, Rolla, MO 65401.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—Division of Geology and Land Survey
Chapter 4—Monitoring Well Construction Code**

PROPOSED RESCISSION

10 CSR 23-4.030 Location of Wells. This rule set criteria for the locations where monitoring well should be placed.

PURPOSE: This rule is being rescinded and substantive information is being incorporated into 10 CSR 23-4.060.

AUTHORITY: sections 256.606 and 256.626, RSMo 2000. Emergency rule filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Original rule filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed Nov. 18, 2010, effective July 30, 2011. Rescinded: Filed June 27, 2018.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: The proposed rescission will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rescission with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, 111 Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, 111 Fairgrounds Road, Rolla, MO 65401.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—[Division of Geology and Land Survey]
Well Installation
Chapter 4—Monitoring Well Construction Code**

PROPOSED AMENDMENT

10 CSR 23-4.050 General Protection of Groundwater Quality and Resources. The board is amending the division name, sections (1) and (2), and removing sections (3) and (4).

PURPOSE: This amendment improves readability by removing

unnecessary language.

(1) Monitoring wells shall not be converted to any other type of well unless *[approved in advance by the division]* **advanced written approval is obtained from the department.**

(2) *[When strict application of these rules presents practical difficulties or unusual hardships, the division, on a case-by-case basis, may modify the application of these rules consistent with the general purpose and intent of these rules and the law. The division may then impose certain conditions as are necessary, in the opinion of the division, to protect the groundwater of the state and health, safety, and general well-being of persons using, or potential users, of the groundwater (see 10 CSR 23-1.040 Modification by the Division for procedures concerning variances).]* **Monitoring wells shall be constructed so that aquifer mixing does not occur and may not be screened through the soil-bedrock horizon unless advanced written approval is obtained from the department. Drilling water shall be of potable quality.**

[(3) It is the obligation and responsibility of the monitoring well installation contractor to ensure that the monitoring well is constructed according to these rules and that the annular space, if one exists, is sealed. The monitoring well must be properly plugged or repaired when the annular space is no longer sealed or the well is no longer performing its intended function.]

(4) When drilling water is needed, it must be of potable quality.]

AUTHORITY: sections 256.606 and 256.626, RSMo [2000] 2016. Emergency rule filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Original rule filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed Nov. 1, 1995, effective June 30, 1996. Amended: Filed Nov. 18, 2010, effective July 30, 2011. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—[Division of Geology and Land Survey]
Well Installation**

Chapter 4—Monitoring Well Construction Code

PROPOSED AMENDMENT

10 CSR 23-4.060 Construction Standards for Monitoring Wells. The board is amending the division name, rule purpose, sections (1)–(10) and (12), deleting section (11), renumbering as needed, and

adding section (13).

PURPOSE: *This amendment improves readability by removing unnecessary language, updates language to be more in line with current industry standards, and incorporates substantive requirements from 10 CSR 23-4.030 Location of Wells.*

PURPOSE: *This rule describes the minimum construction standards for [a properly constructed] monitoring wells.*

(1) Riser Pipe and Screen Material.

(A) Chemical Compatibility. If used in a monitoring well, the riser pipe and screen material selected *[must]* **shall** resist chemical corrosion for the life of the proposed monitoring program **and be new and free from contaminants that would adversely affect the quality of the groundwater.** *[Well construction material must not alter the results of any groundwater analysis.]*

(B) *[Types of]* Riser Pipe and Screen Materials. The **following** types of riser pipe and screen materials *[are divided into four (4) categories—]* **may be used:**

1. Thermoplastic materials, including polyvinyl chloride (PVC) and acrylonitrilebutadiene-styrene (ABS);

2. Metallic materials, including carbon steel, low-carbon steel, galvanized steel, and stainless steel (304 and 316);

3. Fluoropolymer materials, including polytetrafluoroethylene (PTFE), tetrafluoroethylene (TFE), fluorinated ethylene propylene (FEP), perfluoroalkoxy (PFA), polyvinylidene fluoride (PVDF), and polyamides (such as Nylon); and

4. Other types of riser pipe and screen may be used *[if]* **upon advanced written approval [is obtained in advance] from the [division] department.**

5. Industry standard mesh material or pre-manufactured slotted screen is the only approved material for screening; hand-cut solid wall pipe is not allowed.

(C) *[All t/]* Thermoplastic and fluoropolymer riser pipe *[must meet the requirements set out in 10 CSR 23-3.070(1)(D). Thermoplastic and fluoropolymer riser pipe used in monitoring well construction must meet the following minimum standards:]* **shall—**

1. Be new and meet ASTM standards;

[1.]2. [The] Be a minimum [nominal] diameter [for riser pipe and screen installed in monitoring wells is] of two inches (2") except that direct-push wells may have riser pipe [and screen] with a minimum nominal diameter of three-quarters of an inch (3/4"). [Monitoring wells that are greater than one hundred feet (100') in depth must use Schedule 80 pipe];

[2.]3. [The wall thickness of the riser pipe or screen must not be less than the] Be a minimum of Schedule 40 for [the nominal size riser pipe or screen selected, except for] wells one hundred feet or less (≤100') and a minimum of Schedule 80 for wells greater than one hundred feet (>100'). [g/]Gas-migration wells [utilizing] using a soil gas implant and tubing are exempt from this requirement; and

[3.]4. [Thermoplastic riser pipe and screen must b/]Be joined to screen by a watertight mechanical type joint. [The joint must be watertight. If O-rings or fluoropolymer tape is used, they must be of inert materials which will not adversely affect the function of the monitoring well; and]

[4. Riser pipe and screen must be new and free from contaminants that would affect the quality of the groundwater or would adversely affect the monitoring.]

(D) *[All m/]Metallic riser pipe [must meet the following minimum standards:]* **shall—**

1. *[The] Be a minimum [nominal] diameter [for riser pipe and screen installed in monitoring wells is] of two inches (2") except that direct-push wells may have riser pipe and screen with a minimum [nominal] diameter of three-quarters of an inch (3/4").*

2. *[The] Have an equivalent* wall thickness—

A. ~~f/~~For carbon, low-carbon, and galvanized steel *[must]* not *[be]* less than Schedule 40~~/~~;

B. *[The wall thickness of]* For stainless *[304 and 316 must]* steel not *[be]* less than Schedule 5~~/~~; and

C. *[The]* For joint wall thickness *[must]* shall not *[be]* less than Schedule 40~~/~~, with exception for soil gas-monitoring wells utilizing a soil gas implant and tubing; and

3. *[Metallic riser pipe must b/*Be joined by a watertight mechanical joint or welded. *[The well should be checked for the presence of explosive gases before welding begins; and]*

4. Riser pipe and screen material must be new and free from contaminants which would affect the quality of the groundwater or would adversely affect the monitoring.]

(2) Casing Material. *[If geologic conditions require the installation of casing material, the following requirements must be met:]*

[(A) Chemical Compatibility. The casing and casing joints selected must resist chemical corrosion for the life of the proposed monitoring program. The joining of two (2) dissimilar metals is not allowed;]

[(B)](A) [Types of] Casing Materials. The following types of casing [materials are divided into four (4) categories—] shall be used:

1. Thermoplastic materials~~/~~, including polyvinyl chloride (PVC) and acrylonitrilebutadiene-styrene (ABS)];

2. Fluoropolymer materials~~/~~, including polytetrafluoroethylene (PTFE), tetrafluoroethylene (TFE), fluorinated ethylene propylene (FEP), perfluoroalkoxy (PFA), and polyvinylidene fluoride (PVDF). All thermoplastic and fluoropolymer casing material must meet the requirements set out in 10 CSR 23-3.070(1)(D));

3. Metallic materials, including *[carbon steel, low-carbon steel, galvanized steel, and stainless steel (304 and 316). S/*steel casing material *[must meet the requirements set out in] that meets the minimum specifications pursuant to 10 CSR 23-3.030(1)/*; and~~/~~. The joining of two (2) dissimilar metals is not allowed; or

4. Other types of casing may be used *[if approval is obtained in advance from the division] upon advanced written approval from the department.*

[(C)](B) Casing [D/]diameter/. The inside diameter of the casing must] shall be a minimum of four inches (4") larger than the [nominal] outside diameter of the riser pipe being installed/;

[(D)](C) Casing [B/]borehole [D/]diameter/. When installing casing, the borehole for casing must] shall be a minimum of four inches (4") larger in diameter than the [nominal] outside diameter of the casing [being used; and/.

*[(E)](D) [Casing Grouting Requirements. If casing is required to be installed for a monitoring well completion, t/*The casing *[must]*, if installed, shall be grouted full-length *[utilizing]* with high solids bentonite slurry or cement slurry *[as approved under]* pursuant to 10 CSR 23-4.060(9)~~/~~. The casing must be grouted full-length utilizing~~/~~ using the tremie method or one (1) of the pressure grouting methods *[set out in]* pursuant to 10 CSR 23-3.030(3)(1)(B). *[If the casing cannot be sealed to prevent surface contamination from entering the well,]* **Extend** the annular seal for the riser *[must extend]* from a point at least two feet (2') below the base of the casing up to the base of the surface completion.

(3) Monitoring *[W/]well [B/]boreholes [Preparation.] shall—*

(A) *[All boreholes constructed in the installation of monitoring wells must b/*Be clean and free of obstructions~~/~~;

(B) Have a diameter that is at least four inches (4") larger than the outside diameter of the riser pipe and screen;

[(B)](C) [Boreholes constructed for the installation of] For gas-migration type wells [utilizing] using soil vapor implants

[must], be a minimum of one inch (1") in diameter~~/~~ and be exempt from these borehole standards if properly plugged within thirty (30) days of completion; and

*[(C)](D) [Boreholes constructed f/*For direct-push wells *[must]*, be a minimum of three and one-quarter inches (3.25") in diameter and be exempt from these borehole standards if properly plugged within thirty (30) days of completion.

[(D) The diameter of a borehole constructed for the installation of other types of monitoring wells must be at least four inches (4") larger than the outside diameter of the riser pipe and screen. Field testing methods such as gas-migration monitoring and direct-push wells are exempt from these borehole standards if properly plugged within thirty (30) days of completion. When constructing a monitoring well that utilizes hollow-stem augers to bedrock, then rock drilling to total depth, the following exceptions apply:

1. When using an industry-standard-size six and one-quarter-inch (6 1/4") internal diameter hollow stem auger to drill the unconsolidated material portion of the well, the bedrock portion of the well must be drilled with a bit which creates a hole that is at least six inches (6") in diameter for a well constructed using a nominal two-inch (2") diameter riser pipe; and

2. When using an industry standard size eight and one-quarter-inch (8 1/4") internal diameter hollow stem auger to drill the unconsolidated material portion of the well, the bedrock portion of the well must be drilled with a bit which creates a hole that is at least eight inches (8") in diameter for a well constructed using a nominal four-inch (4") diameter riser pipe.]

(4) Open-~~H/~~hole *[C/]completions/*. Open-hole completed monitoring wells are allowed only upon written approval in advance from the division. In all cases, the open-hole portion of the well must~~/~~ may be allowed upon advanced written approval by the department. If approved, the open-hole portion shall be in competent, consolidated bedrock, *[and/* with the casing *[must]* extending from the surface to the minimum total depth and minimum depth into bedrock *[required, under]* pursuant to 10 CSR 23-3.090 *[or 10 CSR 23-3.100]* for a domestic well at that location. The casing *[must]* shall be grouted full-length using methods and materials *[as required under]* pursuant to 10 CSR 23-4.060(2)(E).

(5) Installation of Well Screen and Riser Assembly. The well screen and riser assembly *[must]* shall be centered in the borehole before the installation of the filter pack, unless a prepack filter is used. **Extend** *[T/]the riser pipe [must extend]* from the well screen into the surface completion. *[In a flood prone area, the riser pipe must be at least two feet (2') above the finished surface grade and be equipped with a watertight cap. Wells installed in traffic ways may be flush mounted (subsection (11)(B)). Unless they are direct-push wells or wells constructed through hollow stem augers, monitoring wells in excess of fifty feet (50') in depth must have centralizers to ensure the well string is properly plumbed. A centralizer must be placed at the base of the well screen and on the riser at the top of the filter pack. The specific placement intervals for additional centralizers on the riser should be based on site-specific conditions and ensure the placement of the filter pack, bentonite seal, and annular seal will not be hindered. The use of centralizers in wells constructed through hollow stem augers is not required.] Monitoring wells greater than fifty feet (>50') in depth shall have centralizers installed at the base of the well screen and at the top of the filter pack. A centralizer is not necessary for direct-push wells or wells constructed through hollow-stem augers.*

(6) *[Installation of] Primary Filter Pack. [After the well screen and riser assembly are installed in the well, the filter pack materials must be emplaced.] All monitoring wells shall have a primary filter pack installed using one (1) of the following methods. Other methods may be used upon advanced written approval by the department.*

(A) Artificially Constructed Filter Pack Placement. *Place [T]the filter pack material [must be placed] evenly around the well screen via a tremie pipe. The tremie pipe must be placed [near the] within five feet (5') of the bottom of the well screen and the filter pack material poured into the tremie pipe while the pipe is slowly removed. [A weighted measuring device must be used to ensure that the filter pack is properly installed to the desired depth. All volumes of filter pack material anticipated for construction must be calculated prior to placement.] Fill [T]the borehole with filter pack material [must fill from the bottom of the borehole] to within one to five feet (1'-5') above the well screen. If the well is drilled [utilizing] using the hollow stem auger method, the filter pack material may be poured through the hollow stem auger as it is removed from the borehole. [If the screen is set more than twenty-five feet (25') into the saturated zone or placed into drilling fluid other than clean water or air, the filter pack placement must be via tremie, unless hollow stem augers are used.] Prepacked filter pack assemblies [and prepack seals which are hydrated may be used] may be used in lieu of artificially constructed filter pack placement.*

(B) Naturally Developed Filter Pack Placement. *[Allowing t]The existing geologic material may be allowed to collapse around the well screen [is an acceptable method of filter pack emplacement in only a few geologic conditions. Naturally developed filter packs are only allowable when they can be developed properly] provided the well can be developed.*

(C) *[When installing a monitoring well for shallow monitoring, the primary filter pack must] The primary filter pack on shallow monitoring wells shall extend a minimum of six inches (6") above the top of the well screen.*

(D) Soil vapor implants *[are required to] shall have a minimum primary filter pack of six inches (6") above and below each implant.*

(7) *[The installation of a] Secondary Filter Pack. All monitoring wells shall have a secondary filter pack [is required] unless non-slurry bentonite is used as a bentonite seal or annular seal. [The purpose of a secondary filter pack, which is placed directly on top of the primary filter pack, is to ensure that annular seal slurry grouts do not infiltrate into the primary filter pack.] The secondary filter pack [must] shall extend from one foot to two feet (1'-2') above the primary filter pack and [shall] consist of one foot to two feet (1'-2') of clean fine sand.*

(8) *[The installation of a b]Bentonite [s/Seal. A bentonite seal of two feet (2') or greater is required if the annular seal is composed of slurry grout material and a secondary filter pack is not used. [The purpose of the bentonite seal is to keep the slurry grout which is emplaced above from mixing with the primary and secondary filter pack materials. If required, the bentonite seal must be a minimum of two feet (2') thick.]*

(A) Placement of the Bentonite Seal in the Saturated Zone. When the bentonite seal is to be emplaced in the saturated zone, only *[chipped or pelletized bentonite that is designed to fall through standing water before it hydrates] bentonite chips or pellets* may be used. To avoid flash swelling and bridging, the fine bentonite material, which may develop during transport, *[must] shall* not be introduced into the well bore. *[A weighted measuring device must be utilized to ensure] Place* the bentonite chips *[are]* evenly *[placed]* around the riser pipe.

(B) Placement of the Bentonite Seal in the Unsaturated Zone. When the top of the secondary filter pack is in the unsaturated zone, *[the use of chipped, pelletized, or granular] bentonite [is per-*

mitted only if] chips, pellets, or granules may be used provided the bentonite is hydrated in place with potable water. Bentonite slurry may be used *[and must] to* fill the annular space from the top of the secondary filter pack, *if present*, to the surface seal *via a tremie pipe. [The bentonite slurry must be emplaced through a tremie pipe.]* If the total depth of the slurry being placed exceeds five feet (5'), *use a side discharge [is required so as] to limit disruption of the filter packs.*

[(C) Nested well construction will be considered on a case-by-case basis. Pre-approval by the division is required, via the variance process, before construction begins, except that gas-migration wells constructed using soil vapor implants do not require a variance as long as they meet, the requirements of subsection (6)(D) of this rule, have a minimum bentonite seal of one foot (1') between each primary filter pack, and a minimum of one and one-half feet (1.5') of bentonite seal between the uppermost primary filter pack and that base of the surface completion.]

(9) Installation of the Annular Seal. *[The monitoring well environment may contain many chemicals or organic compounds that could affect the sealing capabilities of various kinds of grout. The type of grout used must be able to function to one hundred percent (100%) of its designed sealing capabilities until the well is properly plugged. The type of grout used must not influence, contaminate, or hinder the use of the monitoring well for its designed purpose.]* The annular seal must extend from the secondary filter pack or bentonite seal to the base of the surface completion. The combined annular seal and bentonite seal (if a bentonite seal is utilized) must be at least two feet (2') thick unless monitoring for shallow contaminants. Monitoring wells constructed for shallow monitoring, *[as defined in 10 CSR 23-4.010,]* must have a minimum combined annular seal and bentonite seal (if a bentonite seal is *[utilized] used*) of at least one foot (1'). The following grout types are permitted in monitoring wells:

(A) Bentonite Slurry-Grout. High solids sodium bentonite slurry, at least twenty to thirty percent (20%-30%) by weight solids, must be tremie grouted from the bottom to the top of the annular space in one (1) continual operation;

(B) Nonslurry Bentonite. *[Sodium bentonite comes in many shapes and sizes. Nonslurry bentonite includes chips, pellets, granules, and powdered varieties.]* Chipped or pelletized varieties that are designed to fall through standing water may be used when sealing the annulus of a well that is below the saturated zone. Granulated and powdered bentonite must never be poured through standing water because they will flash swell and bridge off before *[it gets] getting* to the bottom of the annular space. Bentonite chips or pellets may be used to seal portions of the annular space that are in the unsaturated zone. Granulated and powdered varieties are not permitted to be used in the unsaturated zone unless they are used to create a slurry, due to their flash swelling properties which would prevent hydration of the complete column of bentonite. When using bentonite chips or pellets in the unsaturated zone, it must be hydrated after each three feet (3') interval has been emplaced. To properly hydrate the bentonite, a minimum of three (3) times as much water as bentonite must be used. Water used must be of potable quality;

(C) Cement Slurry. *[Neat cement slurry is a mixture of one (1) ninety-four pound (94 lb.) bag of Portland Type I cement and six (6) gallons of clean water. Five (5) general types of cement are produced: Type I, for general use; Type II, for moderate sulfate resistance or moderate heat of hydration; Type III, for hi-early strength; Type IV, for low heat of hydration; and Type V, for high sulfate resistance. Following are some problems associated with cement slurry grout usage:]*

[1. Type III cement used to produce a hi-early strength and additives that are used to speed up set times of cement slurries cause higher than normal heat of hydration temperatures. These can only be used in association with metallic

casings or riser pipes with prior approval by the division;

[2.]1. Cement slurry may only be used if additives are incorporated to minimize shrinkage.

A. *[Bentonite is the most commonly used additive to prevent shrinkage of cement slurries.]* The powdered bentonite additive must be thoroughly mixed with the water before it is added to the cement. Powdered bentonite from two percent to six percent (2%–6%) by weight must be added. *[The added bentonite improves the workability of the slurry, reduces shrinkage, and reduces the heat of hydration. This additive does reduce the strength of the seal but is adequate for annular sealing. For each percent of bentonite by weight added to a ninety-four pound (94 lb.) bag of Type I cement an additional six-tenths (.6) gallon of water must be added. The following table sets out the amount of bentonite and water needed to be a ninety-four pound (94 lb.) bag of Type I cement to get from one to six percent (1%–6%) cement-bentonite mixture.]*

**[CEMENT/BENTONITE SLURRY
CALCULATIONS]**

Product	% bentonite added/ sk cement	total water requirement (gallons)
Type I Portland		
1 sack = 94 lbs.		
	1% bentonite = .94 lbs. bentonite/sk of cement	5.8 to 6.6
	2% bentonite = 1.9 lbs. bentonite/sk of cement	6.4 to 7.2
	3% bentonite = 2.8 lbs. bentonite/sk of cement	7 to 7.8
	4% bentonite = 3.8 lbs. bentonite/sk of cement	7.6 to 8.4
	5% bentonite = 4.7 lbs. bentonite/sk of cement	8.2 to 9
	6% bentonite = 5.7 lbs. bentonite/sk of cement	8.8 to 9.6]

B. Other shrinkage reducing additives *[must be approved in advance by]* may be used provided advanced written approval is obtained from the *[division]* department;

[3.]2. The water used to mix cement slurry must be of potable quality; and

[4.]3. Cement slurry must be emplaced in the annulus via a tremie pipe placed to the bottom of the annular space. The tremie pipe must have a side discharge which directs the grout away from the bentonite seal, reducing the potential for infiltration. *[Care must be taken so as not to dislodge the bentonite seal that is above the primary filter pack.]* The grouting of the annular space must be completed in one (1) continual operation, lifting the tremie pipe as the space fills. *[If determined necessary by the division, a staged grouting procedure will be approved]* A staged grouting procedure may be used provided advanced written approval is obtained from the department; or

(D) *[Other types of grout may be used when necessary and for good cause if prior approval by the division is granted; and]* Other types of grout may be used provided advanced written approval is obtained from the department.

[E] *When zones of high grout loss are anticipated or experienced, contact the division for alternative methods to seal the annulus.]*

(10) *[Well Protection.]* Surface *[protection]* completion on all monitoring wells is required *[to deter unauthorized entry, prevent surface water from entering the annular space, and protect the well from accidental damage caused by collision*

from vehicles or heavy equipment. The two (2) types of surface completion designs are above-ground completions and flush-mount completions].

(A) Above-Ground Completions. Above-ground completions must meet the following standards:

1. The protective casing must extend from at least one and one-half feet (1 1/2') above the finished grade of the ground surface to a point at least two feet (2') below the finished grade, except as stated in *[subsection (11)]* 10 CSR 23-4.060(10)(B) of this rule for flush-mount completions. *[The riser pipe must be at least two inches (2") below the top of the above-ground completion.]* The above-ground completion must be placed in a hole that is at least eight inches (8") in diameter larger than the above-ground completion size. *[Care must be taken so that the shape of this hole, when filled with concrete, does not encourage frost heaving.]* Protective posts are required for above-ground completed monitoring wells in traffic areas. The protective casing must be centered in this hole and concrete poured around the casing to secure it. Cement or bentonite slurry is not allowed. All water must be removed from the enlarged hole before concrete is added. The surface of the concrete must slope away from the protective casing so that pooling of surface water does not occur;

2. A weep hole or alternate method must be employed to ensure water does not accumulate inside the protective casing to the point that the top of the riser is submerged[, except on temporary wells that are plugged within forty-eight (48) hours of initial installation]; and

3. A locking well cap and a suitable lock must be attached to the top of the above-ground completion. The riser pipe must be sealed with a watertight cap and must extend at least two feet (2') above the finished surface grade in flood prone areas. *[Temporary monitoring wells are exempt from this paragraph if they are plugged within forty-eight (48) hours of initial installation; and]*

4. All monitoring wells must be uniquely identified so as to distinguish one (1) well from another on the monitoring site and on the monitoring well certification form.]

(B) Flush-Mount Well Completions. *[Flush-mount completions must meet the following standards. In a flush-to-ground completion, the flush-mount assembly is installed around the riser pipe that has been cut off below grade.]* The flush-mount assembly must be at least eight inches (8") in length and have a tamper-resistant watertight lid. The riser pipe must be sealed with a watertight cap. The flush-mount surface completion must be set into a hole that is at least eight inches (8") in diameter larger than the diameter of the flush-mount assembly and set in concrete. *[This completion must withstand all stresses due to traffic and to freeze thaw processes.]* If the monitoring well is being placed through asphalt or concrete, a hole that is a least four inches (4") in diameter larger than the diameter of the flush-mount assembly must be constructed. The flush mount must then be set in concrete. Cement or bentonite slurry is not allowed.

(C) All monitoring wells must be uniquely identified at the surface completion.

[(11) Wells must be adequate in size and design for the intended use. Wells should be properly developed in order to allow the collection of representative samples from the horizon being monitored.]

[(12)](11) Alternate monitoring well construction procedures, methods, or technologies [will be considered on a case-by-case basis. Written approval in advance by the division is required] may be used provided advanced written approval is obtained from the department.

[(13)](12) The installation and use of sampling, development, maintenance, or testing devices and equipment in monitoring wells is not

regulated except that the installation of a pumping system in wells used for remediation or clean-up must be performed by a nonrestricted pump installation contractor.

(13) Nested well construction may be allowed upon advanced written approval by the department. Gas-migration wells constructed using soil vapor implants shall meet minimum primary filter pack requirements pursuant to 10 CSR 23-4.060(6), have a minimum bentonite seal of one foot (1') placed between each primary filter pack, and have a minimum of one and one-half feet (1.5') of bentonite seal placed between the uppermost primary filter pack and the base of the surface completion.

AUTHORITY: sections 256.606 and 256.626, RSMo [2000] 2016. Emergency rule filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Original rule filed Aug. 17, 1993, effective March 10, 1994. For intervening history, please consult the Code of State Regulations. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: The proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—[Division of Geology and Land Survey]
Well Installation
Chapter 4—Monitoring Well Construction Code

PROPOSED AMENDMENT

10 CSR 23-4.080 Plugging of Monitoring Wells. The board is amending the division name, removing sections (1), (3), and (4), renumbering as needed, and amending newly renumbered sections (1) and (2).

PURPOSE: This amendment removes unnecessary regulatory burdens and moves substantive certification and registration requirements to 10 CSR 23-2.020 Certification and Registration.

[(1)] A monitoring well that is abandoned as defined in 10 CSR 23-1.010(1) must be plugged. If a monitoring well has been determined to present a threat to groundwater, or determined to be in such a state of disrepair that the well cannot be used for its intended purpose, the division may order that the well be permanently plugged.]

[(2)](1) When plugging a monitoring well, the following minimum requirements shall be met:

(A) Remove [A]all pumps, sampling equipment, debris, or other substances [must be removed];

(B) [All] Remove the surface completion [and permanent casing, riser pipe, and well screen must be removed] from the

borehole ensuring that the grout seal is not disturbed. [If, when removing the casing, the borehole begins to collapse, grout must be simultaneously emplaced while the casing is removed to ensure a proper seal] Cut off riser pipe and/or casing two feet (2') below ground surface;

(C) Fill [T]he well [must be filled] from bottom to [top] within one foot (1') of ground surface with grout[.] pursuant to 10 CSR 23-4.060(9) [sets standards for grout types that may be used when plugging monitoring wells];

(D) [If bentonite grout is used, a]After the grout is fully cured, check for settlement and top off if necessary. Fill remaining hole with soil [and compact the upper two feet (2') of hole] or pave. [The purpose of the compacted soil is to ensure that dehydration of the bentonite grout does not occur over time. If cement-slurry grout is used, fill the upper two feet (2') with soil or pave; and]

(E) Flush mount completions in paved areas may be left in place and filled with asphalt or concrete;

[(E)](F) A monitoring well [that is less than twenty-four feet (24') in total depth] may be completely excavated as opposed to being plugged with grout. [If the remaining hole is ten feet (10') or more in depth, it must be filled with clean replacement material that is compactable to a permeability less than, or equal to, the minimum permeability of the encompassing native materials.] If the well is over drilled, the borehole shall be completely filled with grout pursuant to 10 CSR 23-4.060(9); and

(G) A nonrestricted monitoring well installation contractor must be on site at all times during the excavation and [filling] plugging operations.

[(3)] The plugging or complete excavation of a monitoring well must be reported on a registration report form supplied by the division.

(4) Monitoring wells must be plugged by a nonrestricted monitoring well installation contractor.]

[(5)](2) Temporary monitoring wells ten feet (10') or greater in depth must be plugged by removing any temporary pipe and filling the well from total depth to [three feet (3')] two feet (2') from the ground surface with approved grout, with the remainder of the well filled with compacted uncontaminated native material or grout. Temporary monitoring wells shall be plugged within thirty (30) days of the date of completion.

AUTHORITY: sections 256.606, 256.615, and 256.623, RSMo [2000] 2016. Emergency rule filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Original rule filed Aug. 17, 1993, effective March 10, 1994. For intervening history, please consult the Code of State Regulations. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: The proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—Division of Geology and Land Survey
Chapter 5—Heat Pump Construction Code

PROPOSED RESCISSION

10 CSR 23-5.010 Definitions. This rule specifically defined words used in Chapter 5 concerning heat pump wells, otherwise the definitions contained in 10 CSR 23-1.010 applied.

PURPOSE: This rule is being rescinded and substantive information is being incorporated into 10 CSR 23-1.010 Definitions.

AUTHORITY: sections 256.603, 256.606, and 256.626, RSMo 2000. Emergency rule filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Original rule filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed Nov. 1, 1995, effective June 30, 1996. Amended: Filed May 17, 2013, effective Dec. 30, 2013. Rescinded: Filed June 27, 2018.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed rescission will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rescission with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—Division of Geology and Land Survey
Chapter 5—Heat Pump Construction Code

PROPOSED RESCISSION

10 CSR 23-5.020 Certification and Registration of Heat Pump Systems. This rule set required standards for certification report form submittal.

PURPOSE: This rule is being rescinded and substantive information is being incorporated into a single new proposed rule 10 CSR 23-2.020 Certification and Registration.

AUTHORITY: sections 256.606, 256.623, and 256.626, RSMo 2000. Emergency rule filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Original rule filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed Nov. 1, 1995, effective June 30, 1996. Amended: Filed May 17, 2013, effective Dec. 30, 2013. Rescinded: Filed June 27, 2018.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: The proposed rescission will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rescission with Department of Natural Resources'

Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—[Division of Geology and Land Survey]
Well Installation
Chapter 5—Heat Pump Construction Code

PROPOSED AMENDMENT

10 CSR 23-5.030 General Protection of Groundwater Quality and Resources. The board is amending the division name and sections (1) and (2).

PURPOSE: This rule is being amended to remove obsolete and unnecessary language.

(1) Heat pump wells *[once constructed]* shall not be converted to any other type of well, *except by written approval by the division]* unless advanced written approval is obtained from the department.

(2) *[It is the obligation and responsibility of the heat pump installation contractor to verify that the heat pump system is constructed according to the rules.]* On open-loop systems that utilize groundwater wells, it is the responsibility of the water well installation contractor to ensure that the integrity of the annular seal remains viable for three (3) years after the date of certification unless it can be shown that the well seal has been damaged by other persons.

AUTHORITY: sections 256.606 and 256.626, RSMo [2000] 2016. Emergency rule filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Original rule filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed May 17, 2013, effective Dec. 30, 2013. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—[Division of Geology and Land Survey]
Well Installation
Chapter 5—Heat Pump Construction Code

PROPOSED AMENDMENT

10 CSR 23-5.040 Location of Heat Pump Wells. The board is amending the division name, section (2) and (5), removing section

(3) and (4), and renumbering as needed.

PURPOSE: This rule is being amended to improve readability by removing unnecessary language.

(2) *[Vertical heat pump wells shall not be located within certain d/*Distances from pollution or contamination sources. A vertical heat pump well shall be at least—

[(3) Horizontal heat pump loops should be at least two feet (2') above or below any other intersecting underground piping (to prevent freezing of the water lines) or wiring on the property, except a soaker pipe for the heat pump system used to keep the soil moisture constant.

(4) A variance may be applied for if setback distances cannot be met. The variance must be obtained in advance from the division.]

[(5)](3) Any heat pump well [installed in the state of Missouri, which] that encounters oil and/or gas[,] must have a grout plug from fifty feet (50') below the oil and/or gas bearing zone to fifty feet (50') above the oil and/or gas bearing zone. The grout plug must be composed of neat cement grout with a two percent–six percent (2%–6%) bentonite additive and be placed via tremie. The well must be grouted *[as stated in]* pursuant to 10 CSR 23-5.050(7)(A), from the bottom of the neat cement grout plug to total depth and from the top of the neat cement grout plug to the surface. If the well terminates in the oil and/or gas bearing zone, a grout plug composed of neat cement with a two percent–six percent (2%–6%) bentonite additive and placed via tremie must be placed from total depth to fifty feet (50') above the oil and/or gas bearing zone. The well must be grouted *[as stated in]* pursuant to 10 CSR 23-5.050(7)(A), from the top of the neat cement grout plug to the surface.

AUTHORITY: sections 256.606 and 256.626, RSMo [2000] 2016. Emergency rule filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Original rule filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed Nov. 1, 1995, effective June 30, 1996. Amended: Filed May 17, 2013, effective Dec. 30, 2013. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: *Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, 111 Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, 111 Fairgrounds Road, Rolla, MO 65401.*

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—[Division of Geology and Land Survey]
Well Installation**

Chapter 5—Heat Pump Construction Code

PROPOSED AMENDMENT

10 CSR 23-5.050 Construction Standards for Closed-Loop Heat Pump Wells. The board is amending the division name, sections (1),

(2), (3), (4), (6), (7), (8), (9), (10), (11), and (12), and renumbering as needed.

PURPOSE: This rule is being amended to remove non-substantive regulatory burdens, allow jetted heat pump wells in Drilling Area 5 to be deeper than seventy-five feet (75'), and to improve readability by removing unnecessary language.

(1) Casing *[Material. If permanent casing is needed in a heat pump well, it must meet standards set in 10 CSR 23-3.030 for steel and 10 CSR 23-3.070 for plastic and must be]*, when used, shall follow the minimum standards pursuant to 10 CSR 23-3.030(1)(A) and be grouted full-length.

(2) Heat Pump Loop Material. In a closed-loop heat pump well, the material used to make up the heat-exchange loop that is placed in the borehole or trench must be composed of high density polyethylene or polybutylene pipe and must be installed and grouted without delay upon completion of drilling each well.

(B) Polybutylene Pipe. This pipe must be manufactured in accordance with ASTM D-2581. The pipe material must be—

1. Either Class B (general purpose and dielectric, in colors) or Class C (weather resistant, black in color containing not less than two percent (2%) carbon black);

2. Type II (density, ninety-one thousandths to ninety-two thousandths (0.0/0/91–0.0/0/92) grams per centimeter (g/cm));

3. Grade 1 (flow rate twenty-five thousandths to seventy-five thousandths (0.0/0/25–0.0/0/75) gallons per ten (10) minutes (g/10 min)).

(C) Other pipe may be used *[if approval is granted in advance by the division]* upon advanced written approval by the department.

(3) Connecting Closed-Loop Pipe. Polyethylene and polybutylene pipe must be thermally fused according to the pipe manufacturer's specifications and must not leak after assembly.

(A) Other connection methods may be used *[if approval is granted in advance by the division]* upon advanced written approval by the department.

(4) Heat Transfer Fluid. The fluid used inside the closed-loop assembly must *[be approved by the board and]* meet the following standards:

(A) Heat transfer fluids must be composed of—

1. Inhibited glycol;

2. Methanol;

3. Water;

4. Ethanol; or

5. Other fluids may be used *[if approval by the division is received in advance]* upon advanced written approval by the department.

(6) Borehole Depth. Closed-loop heat pump wells must not be deeper than five hundred feet (500'). *[A variance must be obtained in advance, from the division, to drill a heat pump well deeper than five hundred feet (500').]* Total depth of a new heat pump well in **Drilling Area 12** (formerly Special Area 3) and **Drilling Area 13** (formerly Special Area 4) shall be determined in advance of drilling by the *[division]* department.

(7) Grouting Depth of Vertical Heat Pump Wells. Grouting the annulus of a heat pump well must be completed immediately after the well is drilled due to cave-in potential in the uncased hole.

(B) Vertical heat pump wells drilled two hundred feet (200') or less that are not grouted full-length[,]

 must follow the hole size requirements stated in section (5) and nonslurry bentonite plugs must be placed in the borehole. A plug (first plug) must be placed forty feet (40') above the total depth of the borehole. This plug must be

composed of bentonite chips or pellets utilizing at least one (1) bag of bentonite resulting in at least a five foot (5') plug. Every forty feet (40') of borehole that exists above the first plug must have a plug set as described in this section. A near surface plug, consisting of bentonite granules or powder, must be set from a point ten feet (10') below the bottom of the trench that connects the closed-loop to the heat pump machine to the base of the trench. All bentonite plugs must be hydrated immediately with six to eight (6–8) gallons of potable water for each bag of bentonite after emplacement if they are in the unsaturated zone. All clean fill material placed between the bentonite plugs must be chlorinated. Clean fill is defined as sand, local drill cuttings, pea gravel, varied sized agricultural lime, or clean aggregate free from contamination. Contractors utilizing this type of grouting method must notify the [division] department at least forty-eight (48) hours prior to beginning any construction on the system. The [division] department will maintain a list of current notification methods (includes, but is not limited to, telephone, fax, email, voice mail, and the department's online notification system) and contact information available online or upon request. Notification information must include: owner name, owner address, GPS location, date work is to begin, primary contractor name, primary contractor permit number, drilling contractor name, and drilling contractor permit number.

(8) Approved Grout Materials. The following four (4) grout types are permitted for use in heat pump wells:

(A) Bentonite Slurry. High solids sodium bentonite slurry must be at least twenty percent to thirty percent (20%–30%) by weight solids to be used as grout. Thickened drilling mud or thinner bentonite slurry is strictly prohibited. *[Specialized pumps are required to pump a high solids bentonite slurry.]* When bentonite slurry is used, it must be applied in one (1) continual motion, through a tremie lowered to the grouting point. *It is recommended that full-length grout be used in all vertical closed-loop heat pump wells. The tremie pipe may be removed while the borehole is filled or removed afterward;*

(B) Nonslurry Bentonite. **Only** [C]hipped or pelletized bentonite *[varieties that are designed to fall through standing water]* may *[only]* be used when sealing the annulus of a well that is below the water level in the saturated zone. *[Complete hydration is difficult to achieve when using dry nonslurry bentonite in the unsaturated zone.]* All nonslurry sodium bentonite varieties may be used in the unsaturated zone if the hole is dry and no bridging occurs. The dry bentonite must be hydrated after emplacement. *[The effective use of nonslurry bentonite as a sealing agent depends on the efficient hydration of the product];*

(D) Other Grout. Other types of grout may be used if **advanced** written approval is *[granted in advance by the division]* obtained by the department.

(9) Wells that Encounter Karst Conditions. When a borehole encounters caves or larger fractures, *[grouting may become difficult.]* C/chlorinated clean fill, such as gravel or sand, may be used to fill these intervals. Small fractures are effectively sealed by using chipped, hydrated bentonite. If the borehole cannot be grouted as specified, it must be plugged.

(10) Jetted Heat Pump Wells. Closed-loop heat pump wells that are jetted in **Drilling Area 5** (see Figure 5) must *[not be deeper than seventy-five feet (75') and at least the upper]* have a **minimum top grout plug** of ten feet (10') *[of borehole must be grouted].*

(11) Heat Pump Wells in **Drilling Area 12** (formerly Special Area 3). *[Portions of Franklin County within and south of the city of New Haven are listed as Special Area 3 (Figures 7B and 7C, 10 CSR 23-3.100(7)) due to the contamination of portions of the aquifer by one (1) or more of the following*

chemicals of concern: tetrachloroethylene (PCE), trichloroethylene (TCE), PCE degradation products and TCE degradation products or other contaminants of the National Public Drinking Water Regulations (NPDWR). In this area it is necessary to utilize more stringent construction standards for new heat pump wells that are drilled into the aquifer. In Special Area 3 a qualified and properly trained individual shall collect all groundwater samples for analysis of chemicals of concern.] may be constructed provided advanced written approval is obtained from the department pursuant to 10 CSR 23-3.090(12).

[(A) The division shall be consulted before constructing a new heat pump well in Special Area 3. The division will provide specific guidance on heat pump well drilling protocol and construction specifications on a case-by-case basis. The division must provide written approval for all new heat pump wells in Special Area 3 prior to construction.

(B) All drilling-derived fluids and solid materials from heat pump wells drilled in Special Area 3 shall be containerized, sampled, and managed pursuant to Missouri hazardous waste management regulations.

(C) Any heat pump well drilling operation, in which PCE and/or TCE is encountered in a pure-product phase (also known as dense non-aqueous phase liquid or DNAPL), drilling shall cease and the division shall be notified immediately. The division will determine further action.]

(12) Heat Pump Wells in **Drilling Area 13** (formerly Special Area 4). *[Portions of St. Charles County west of the city of Weldon Spring are listed as Special Area 4 (Figure 7D, 10 CSR 23-3.100(8)) due to the contamination of portions of the aquifer by one (1) or more of the following chemicals of concern: trinitrotoluene (TNT) and dinitrotoluene (DNT) at the Army Corps of Engineers (COE) site, 2,4,6-TNT, 2,4-DNT, 2,6-DNT, dinitrobenzene (1,3-DB), nitrobenzene (NB), nitrate, uranium, and trichloroethylene (TCE) at the Department of Energy (DOE) main site, uranium and 2,4-DNT at the DOE Quarry, or other contaminants of the National Public Drinking Water Regulations (NPDWR). In this area it is necessary to utilize more stringent construction standards for new heat pump wells that are drilled into or through the shallow aquifer defined as the Burlington Keokuk/Fern Glen formation(s) at the main site and the Kimmswick limestone at the DOE Quarry. In Special Area 4 a qualified and properly trained individual shall collect all groundwater samples for analysis of chemicals of concern. Sampling qualifications and training requirements will be determined in advance of sampling by the division and approval will be issued in written format.] may be constructed provided advanced written approval is obtained from the department pursuant to 10 CSR 23-3.090(13).*

[(A) The division shall be consulted before constructing a new heat pump well in Special Area 4. The division will provide specific guidance on heat pump well drilling protocol and construction specifications on a case-by-case basis. The division must provide written approval for all new heat pump wells prior to construction.

(B) All drilling-derived fluids and solid materials shall be containerized, sampled, and managed pursuant to Missouri hazardous waste management regulations.]

AUTHORITY: sections 256.606 and 256.626, RSMo [2000] 2016. Emergency rule filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Original rule filed Aug. 17, 1993, effective March 10, 1994. For intervening history, please consult the *Code of State Regulations*. Amended: Filed June 27, 2018

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500)

in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—[Division of Geology and Land Survey]
Well Installation**

Chapter 5—Heat Pump Construction Code

PROPOSED AMENDMENT

10 CSR 23-5.060 Construction Standards for Open-Loop Heat Pump Systems [That Use Groundwater]. The board is amending the division name, rule title, sections (2), (3), and (4), removing sections (1), (5), and (6), and renumbering as needed.

PURPOSE: The title of this rule is being amended because Closed-Loop Heat Pump Systems That Use Refrigerants as the Heat Transfer Fluid are no longer allowed and to improve readability by removing unnecessary language.

[(1) Open-loop heat pump systems and their installers that utilize existing surface water supply which is plumbed through the heat pump machine and returned to the same surface water supply are exempt from these rules.]

[(2)](1) Open-[L]oop [Heat Pump Systems and G]roundwater [S]upply [W]ells. An open-loop heat pump uses groundwater produced from wells which are plumbed through the heat pump machine where the heat transfer of the groundwater is accomplished. The groundwater is then utilized at the surface or returned to the ground via a return well. Any newly drilled or reconstructed well utilized for supply or return water must meet the construction standards set out in 10 CSR 23-3.] shall be constructed to domestic/multifamily well standards pursuant to 10 CSR 23-3.030(1) if it produces less than seventy (70) gallons per minute and to high yield well standards pursuant to 10 CSR 23-3.030(3) if it produces more than seventy (70) gallons of water per minute. Any well that was constructed before October 1987 that is utilized as the water supply or return for an open-loop heat pump system is exempt from these rules, except that the surface disposal of the water may [fall under the Division of Environmental Quality rules and the return of the produced water via a well must meet rules set out in this section] be subject to other regulations.

[(3)](2) Heat pump systems and [S]urface [D]isposal of [U]sed [W]ater. After the water passes through the heat pump machine, it may be disposed of to the surface only if the water remains on the landowner's property. It may not be run to drainage that leaves the property unless applicable permits are secured through the Water Protection Program, Division of Environmental Quality. If the heat pump utilizes more than twenty-five (25) gallons of water per minute when it is in operation, surface disposal of the used water is

prohibited.] may require a permit pursuant to 10 CSR 20-6.

[(4)](3) Open loop [W]ater [R]eturn [and Supply W]ells [for Domestic Heat Pump Applications. Water return wells] shall [meet the requirements set out in 10 CSR 23 Chapters 1, 2, and 3 concerning casing, casing depth, well seal, borehole, grouting, and reporting.] be constructed to domestic/multifamily well standards pursuant to 10 CSR 23-3.030(1) if it produces less than seventy (70) gallons per minute and to high yield well standards pursuant to 10 CSR 23-3.030(3) if it produces more than seventy (70) gallons of water per minute. The depth of the [water] return well [must not exceed the depth of the water supply well.] shall be a similar depth as the supply well and the [W]ater must be returned to the same aquifer[, at a similar depth that it was taken from in the water supply well. A sanitary well seal or a pitless adapter may be used, and]. [t]The water return pipe must extend at least twenty feet (20') below the static water level.

[(5) Water Return Wells for Nondomestic Heat Pump Applications. Specifications for water return wells in other than domestic applications will be determined on a case-by-case basis by the division, taking into account the water quality and quantity, geology, hydrology and water usage in the area.

(6) To drill and construct an open-loop heat pump well or a water return well, the driller must have a nonrestricted water well installation permit.]

AUTHORITY: sections 256.606 and 256.626, RSMo [2000] 2016. Emergency rule filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Original rule filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed Nov. 1, 1995, effective June 30, 1996. Amended: Filed May 17, 2013, effective Dec. 30, 2013. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—[Division of Geology and Land Survey]
Well Installation**

Chapter 5—Heat Pump Construction Code

PROPOSED AMENDMENT

10 CSR 23-5.080 Plugging of Heat Pump Wells. The board is amending the division name, sections (1) and (2), and removing section (3).

PURPOSE: This rule is being amended to remove unnecessary language and to move substantive certification and registration requirements to the proposed rule 10 CSR 23-2.020 Certification and

Registration.

(1) Vertical Closed-Loop Heat Pump Wells. To plug a properly constructed vertical closed-loop heat pump well the following specifications must be met:

(A) Remove all heat transfer fluid from the closed-loop and take necessary precautions to ensure groundwater protection; **and**

(B) Dig down to the top of borehole and cut off the loop pipe/. *This must be* at least three feet (3') below the surface. Pump the remaining loop full of bentonite or cement slurry. Allow the grout to fill the upper one foot (1') of borehole. Fill remaining hole with compacted earth or pavement/; *and*/.

[(C) Submit registration report form and fee to the division within sixty (60) days which documents the proper plugging of the heat pump well. Upon review and approval of the registration report form, a registration number will be sent to the landowner which designates that the well was plugged according to the minimum standards.]

(2) Open-Loop Heat Pump Wells. Wells used to supply water for *[the]* heat pump and water return wells must be plugged *[as set out in]* pursuant to 10 CSR 23-3.110 *[Plugging of Wells. A registration report form and fee must be submitted].*

[(3) Plugging Improperly Constructed Heat Pump Wells. When it is determined by the division that a heat pump well is constructed improperly, it must be brought into compliance with the rules or plugged. To plug an improperly constructed heat pump well, the following specifications must be met:

(A) Remove all pipes from hole;

(B) Clean out well bore of loose material;

(C) Plug well full-length with approved grout; and

(D) Submit registration report form and fee.]

AUTHORITY: sections 256.606, 256.623, and 256.626, RSMo [2000] 2016. Emergency rule filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Original rule filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed May 17, 2013, effective Dec. 30, 2013. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

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Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—Division of Geology and Land Survey
Chapter 6—Test Hole Construction and Plugging Code

PROPOSED RESCISSION

10 CSR 23-6.010 Definitions. This rule specifically defined words used in Chapter 6 concerning test wells, otherwise the definitions contained in 10 CSR 23-1.010 applied.

PURPOSE: This rule is being rescinded and substantive information is being incorporated into 10 CSR 23-1.010 Definitions.

AUTHORITY: sections 256.606 and 256.626, RSMo Supp. 1991. Original rule filed Aug. 17, 1993, effective March 10, 1994. Rescinded: Filed June 27, 2018.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed rescission will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rescission with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—[Division of Geology and Land Survey]
Well Installation

Chapter 6—Test Hole Construction [and Plugging] Code

PROPOSED AMENDMENT

10 CSR 23-6.020 General Protection of Groundwater Quality and Resources. The board is amending the division name, chapter name, and sections (1) and (2).

PURPOSE: This rule is being amended to improve readability by removing unnecessary and redundant language and moving substantive requirements from 10 CSR 23-6.040 that relate to groundwater protection to this rule.

(1) *[Differences Between Wells. The rules contained in 10 CSR 23-6 cover test holes drilled for obtaining geologic data or mineral exploration data. Test holes differ from water wells, monitoring wells and heat pump wells in that the information obtained from test holes and their locations are often proprietary information. Test holes, in many cases, are smaller in diameter than water wells. In addition, test holes are drilled and are then quickly plugged.] All test holes shall be constructed in a manner that will conserve and protect the groundwater resources and not be a source or channel of contamination or pollution to any aquifer.*

(2) Test holes *[that are to be converted into other types of wells. Test holes may be converted into a well at the request of the landowner. All requests must be made in writing to the division, by the landowner. The well must meet the applicable standards contained in 10 CSR 23-1–10 CSR 23-6.]* may be converted into other types of wells provided advanced written approval is obtained from the department and the well is constructed to the minimum standards provided in 10 CSR 23.

AUTHORITY: sections 256.606, 256.615, and 256.626, RSMo [1994] 2016. Original rule filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed Nov. 1, 1995, effective June 30, 1996. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—[Division of Geology and Land Survey]
Well Installation**

Chapter 6—Test Hole Construction [and Plugging] Code

PROPOSED AMENDMENT

10 CSR 23-6.030 Location of Test Holes. The board is amending the division name, chapter name, and section (1).

PURPOSE: This rule is being amended to more clearly state that the setback distances given in 10 CSR 23-3.010 Location of Wells also apply to test holes.

(1) [The need to obtain site-specific data dictates the location of test holes. If the hole needs to be located closer than distance requirements stated in 10 CSR 23-3.010, a variance must be obtained before the hole is drilled (see 10 CSR 23-1.040 for details on variance issuance).] **Setback distances shall be followed pursuant to 10 CSR 23-3.010(1) Table 3.1.**

AUTHORITY: sections 256.606 and 256.626, RSMo [Supp. 1991] 2016. Original rule filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—[Division of Geology and Land Survey]
Well Installation**

Chapter 6—Test Hole Construction [and Plugging] Code

PROPOSED AMENDMENT

10 CSR 23-6.040 Construction Standards for Test Holes. The

board is amending the division name, chapter name, sections (2), (3), (4), and (6), removing sections (1) and (5), and renumbering as needed.

PURPOSE: This rule is being amended to remove unnecessary restrictions regarding the amount of permanent casing that must be set into bedrock and to move requirements that relate to groundwater protection to 10 CSR 23-6.020 General Protection of Groundwater Quality and Resources.

[(1)] **Standards for Construction of Test Holes.** All test holes shall be constructed in a manner that will conserve and protect the groundwater resources and not be a source or channel of contamination or pollution to any aquifer.]

[(2)](1) **Casing [Material.** All casing used in the construction of a test well must meet or exceed] **when used shall follow the minimum standards [set out in] pursuant to 10 CSR 23-3.030(1)(A).**

[(3)](2) **Casing Depth.** If permanent surface casing is set, it must be set at least [fifty feet (50')] **thirty feet (30')** into bedrock. [Temporary surface casing lengths may be determined by the permitted contractor.]

[(4)](3) **Temporary Cap.** All holes must be capped during the period they remain unplugged **pursuant to 10 CSR 23-3.030(1)(E).**

[(5)] **Hole Size.** Test hole size will be determined by the person owning the mineral rights or designing the hole.]

[(6)](4) [Approved] **Grout[.** When a hole is grouted, procedures and materials set out in 10 CSR 23-3.030(3) and (4) must be followed] **when used to seal casing annulus shall follow materials and methods pursuant to 10 CSR 23-3.030(1)(C).**

AUTHORITY: sections 256.606 and 256.626, RSMo [1994] 2016. Original rule filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed Nov. 1, 1995, effective June 30, 1996. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—[Division of Geology and Land Survey]
Well Installation**

Chapter 6—Test Hole Construction [and Plugging] Code

PROPOSED AMENDMENT

10 CSR 23-6.050 Plugging of Test Holes. The board is amending the division name, chapter name, sections (1), (2), and (3), and adding a new section (4).

PURPOSE: *This amendment improves readability by removing unnecessary language and clarifies the type and amount of grout plug required for these types of wells to bring them in line with industry standards.*

(1) All test holes, except those that are converted to other types of wells are to be plugged in accordance with this chapter within sixty (60) days from the date that the well was drilled. *[Extensions of this time limit are available on a case-by-case basis from the division.]* Submit plugging registration records pursuant to section 256.614.1, RSMo. Test holes are exempt from submitting construction certification records.

(A) Plugging the Test Hole.

1. Test holes with no surface casing.

[A. Test holes must be filled with grout via tremie to within two feet (2') of the ground surface. If the Davis Formation is penetrated, an expanding packer must be placed in the bottom portion of the formation and grouted to within two feet (2') of the surface.

B. The top two feet (2') of hole must be filled with soil.

C. A registration report form must be submitted to the division which documents the method of plugging the test hole.]

A. Fill the test hole from total depth to within two feet (2') of ground surface with grout.

B. If the Davis Formation is penetrated, a grout plug shall extend from the bottom of the formation to within two feet (2') of ground surface.

C. A mechanical packer may be installed at the bottom of the Davis Formation or emplace clean fill from total depth to the bottom of the Davis Formation to hold the grout plug in place.

D. Fill the top two feet (2') of hole with soil.

2. Test holes with removable surface casing pipe.

[A. If the Davis Formation is penetrated, an expanding packer must be set in the bottom portion of the formation.

B. The hole must be filled with grout from the packer to the bottom of the interior casing pipe via tremie pipe. This grout plug must extend from near the bottom of the Davis Formation to at least fifty feet (50') above the top of the Davis Formation.

C. The hole must be backfilled with chlorinated clean fill such as varied sized agricultural lime, gravel or sand to the base of the surface casing pipe, while the interior casing is being pulled.

D. A fifty-foot (50')-grout plug must be pumped through the surface casing pipe as it is being removed, filling the hole to the top of bedrock.

E. Chlorinated clean fill must be used to backfill the hole above the upper plug while the surface casing pipe is being removed. The clean fill must extend from the top of the grout plug to within two feet (2') of the surface.

F. The top two feet (2') of the hole must be filled with on-site soil.

G. A registration report form must be submitted to the division which documents the method of plugging.

H. The test hole may be filled from total depth to surface with grout.]

A. Remove the surface casing and any interior casing if used.

B. Fill the test hole from total depth to within two feet (2') of ground surface with grout.

C. If the borehole has collapse potential, add grout as casing is withdrawn.

D. If the Davis Formation is penetrated, a grout plug shall extend from the bottom of the formation to within two feet (2') of ground surface.

E. A mechanical packer may be installed at the bottom of

the Davis Formation or emplace clean fill from total depth to the bottom of the Davis Formation to hold the grout plug in place.

F. Fill the top two feet (2') of hole with soil.

3. Test holes with grouted nonremovable surface casing.

[A. Cut off casing three feet (3') below ground surface making a hole at least two feet (2') in diameter larger than the surface casing.

B. Fill the hole from total depth to within two feet (2') of the surface with grout.

C. Fill remaining hole with soil.

D. Submit a registration report form to the division.]

A. Cut the casing off two feet (2') below ground surface or three feet in an agricultural area. If bedrock is encountered, cut the casing flush with the top of bedrock.

B. Fill the test hole from total depth to within two feet (2') of ground surface with grout.

C. If the Davis Formation is penetrated, a grout plug shall extend from the bottom of the formation to within two feet (2') of ground surface.

D. A mechanical packer may be installed at the bottom of the Davis Formation or emplace clean fill from total depth to the bottom of the Davis Formation to hold the grout plug in place.

E. Fill the top two feet (2') of hole with soil.

[(2) Test Holes Drilled to Expand Quarrying and Surface Mining Operations. When test holes are drilled in the process of expanding quarrying and surface mining operations and are destroyed within one (1) year by the advance of the mine or quarry, they are required to be plugged by only inserting a temporary surface plug into the hole which will prevent surface water from entering the hole. Reporting requirements are not required for these temporary holes. If these test holes are drilled deeper than the quarry or mine floor, they must be plugged from the mine floor to the total depth of the hole with approved grout. If these holes are not destroyed by the mining process within one (1) year then the requirements of subsection (1)(A) must be met. Extensions of this time limit will be considered on a case-by-case basis by the division.

(3) Test Holes Drilled in Association with Clay Mining Operations, Shallow Industrial Minerals Exploration and Miscellaneous Geologic Data Holes.

(A) When the test hole is drilled that bottoms in an impermeable fire clay deposit a temporary surface plug must be inserted which prevents surface water from entering the hole. This type of well is exempted from reporting requirements.

(B) When a test hole is drilled that bottoms at the bedrock-unconsolidated material contact or above, it must be plugged when no longer needed for exploratory purposes. If the test hole is less than one hundred feet (100') in depth and does not encounter a potable water horizon, the test hole must be plugged by filling the hole from bottom to top with the type of uncontaminated material removed from the hole or other approved grout. A registration report is required per site for holes drilled and plugged that are greater than twenty feet (20') in depth. One (1) registration fee is required per report form for this type of hole. If a test hole is less than twenty feet (20') in depth, it must be filled with the material removed from the hole as soon as it is no longer needed for exploratory purposes. Test holes less than twenty feet (20') in depth are exempted from the rules. These wells can not be used in any way relative to monitoring well sites.

(C) If a test hole is greater than one hundred feet (> 100') in depth, it must be plugged as stated in 10 CSR 23-6.050(1).]

(2) Test holes drilled to expand quarrying and surface mining operations.

(A) Test holes completely destroyed within one (1) year of the advance of the mine or quarry shall have a ten foot (10') surface grout plug and are exempt from plugging registration requirements.

(B) Test holes that are not destroyed within one (1) year of the advance of the mine or quarry are subject to plugging requirements pursuant to 10 CSR 23-6.050(1).

(C) Test holes that penetrate the quarry or mine floor which are not completely destroyed by the quarry or mine operation shall be plugged with grout from total depth to the bottom of the quarry or mine and are subject to plugging registration requirements.

(3) Clay mining operations. Test holes that do not penetrate beneath an impermeable fire clay deposit shall have a ten foot (10') surface grout plug and are exempt from plugging registration requirements.

(4) Unconsolidated material test holes less than one hundred feet (<100') deep.

(A) Test holes less than twenty feet (<20') in depth may be plugged using clean fill or uncontaminated native material and are exempt from plugging registration requirements.

(B) One (1) registration report and fee is required per site for test holes that are twenty feet (20') in depth or greater. All test holes plugged may be reported on one (1) form.

(C) Test holes where no ground water is encountered, may be plugged using clean fill or uncontaminated native material.

(D) Test holes may not be used for monitoring.

AUTHORITY: sections 256.606, 256.614, 256.615, and 256.626, RSMo [1994] 2016. Original rule filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed July 13, 1994, effective Jan. 29, 1995. Amended: Filed Nov. 1, 1995, effective June 30, 1996. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Amber Steele at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 14, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 7, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 23—Division of Geology and Land Survey
Chapter 6—Test Hole Construction and Plugging Code**

PROPOSED RESCISSION

10 CSR 23-6.060 Confidentiality of Registration Report Form. This rule set standards to ensure that registration report forms are held confidential for at least ten years as required in section 256.615, RSMo.

PURPOSE: This rule is being rescinded and substantive information

is being incorporated into a single new proposed rule 10 CSR 23-2.020 Certification and Registration.

AUTHORITY: sections 256.606, 256.614, 256.615 and 256.626, RSMo Supp. 1991. Original rule filed Aug. 17, 1993, effective March 10, 1994. Rescinded: Filed June 27, 2018.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: The proposed rescission will not cost private entities more than five hundred dollars (\$500) in the aggregate.

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**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 26—Petroleum and Hazardous Substance
Storage Tanks
Chapter 2—Underground Storage Tanks—Technical
Regulations**

PROPOSED AMENDMENT

10 CSR 26-2.080 [Risk-Based Target Levels] No Further Action. The department is deleting sections (2) and sections (4) through (8), amending the title, purpose statement, and section (3) of the rule, and renumbering as needed.

PURPOSE: This rule is being amended to eliminate portions of the rule that are outdated and duplicative of other regulatory and statutory requirements. Removing the outdated portions of the rule will eliminate confusion about the applicability of these requirements and support the department's efforts to get rid of unnecessary and outdated rule language.

PURPOSE: This rule [sets clean-up levels for underground storage tank corrective actions and for site assessment, site characterization, and workplan development, which are all stages in developing clean-up levels. The rule also sets deed notice language to assure that the site is not used in a manner which would pose unacceptable risk or exposure. The rule requires that sites be ranked and that the ranking be used to allocate staff and funds.] describes the conditions under which a "No Further Action" status may be assigned to sites that have had a release from an underground storage tank.

[(2) Upon being so directed by the department, the UST remediator shall conduct a preliminary assessment of the site.

(A) The requirement for a preliminary assessment is waived if permanent closure is being conducted, or significant contamination is known to exist at the site, and the department has been notified of a release as required in 10 CSR 24-3.010(1).

(B) The preliminary assessment shall be conducted according to department guidance.]

[(3)](2) The department will evaluate the results of the [preliminary] risk assessment [to rank the site relative to other sites] for further characterization and/or corrective action.

(A) If the [preliminary] risk assessment shows, to the department's satisfaction, that maximum contamination levels are below the [action] default target levels outlined in the [department's underground storage tank closure guidance document,] document referenced at paragraph (3)(C)1. or (3)(C)2. of 10 CSR 26-2.078, and the site poses no risk to ecological receptors, the department will require no further action at the site.

(B) If the risk assessment shows, to the department's satisfaction, that all current and potential exposure pathways are incomplete (both on and off-site) or that no unacceptable risk from complete exposure pathways exists, and provided the conditions of sections 7.6, 8.4, or 9.5 of the document referenced at paragraph (3)(C)1. or (3)(C)2. of 10 CSR 26-2.078 are met, the department will require no further action at the site.

[(B)](C) If, in accordance with subsection [(3)](2)(A) or (2)(B) of this rule, the department determines that no further action is required at a site, and if subsequent information becomes available to indicate that contamination may be present at the site at levels which may threaten human health or the environment, the department may require additional investigation or site characterization and/or corrective action.

[(4) If full site characterization is required by the department, due to known contamination or in accordance with subsection (3)(B) of this rule, the UST remediator shall conduct the site characterization according to department guidance.

(5) The department will review the site characterization and rank the site relative to other sites based on site conditions as reflected in the site characterization and the potential risk to human health and/or the environment.

(A) The rank assigned to the site will be used to prioritize department actions including, but not limited to review of documents, pre-approval of costs and reimbursement of costs, in regard to the site.

(B) The department will not require further action at sites that the department deems not to pose a risk to human health and/or the environment, unless there is a change in known conditions at the site that would upgrade its priority, as determined by the department.

(6) Except as provided in section (8) of this rule, site clean-up objectives will be set as follows:

(A) Site clean-up objectives for the cleanup of petroleum released from underground storage tanks will be set by using the scoring matrix and the groundwater clean-up standards as outlined in the department's underground storage tank closure guidance document.

(B) (Reserved) (Note: The soil scoring matrix is a site-specific risk-based method which accounts for future land use and other considerations. Upon further development and review, this method or another which also meets statutory requirements, will be set forth in this section.)

(7) Site clean-up objectives and workplans are subject to approval by the department. Such approval must be granted in writing prior to implementation of the workplan.

(8) For all sites which are cleaned up to meet levels less stringent than (higher than) those set according to section (6) of this rule, the UST remediator shall file a document in the chain of title of the property. The document shall state that the contaminant levels were deemed acceptable by the department, based on the land use and other considerations, at the time of cleanup.

(A) If the UST remediator is a person other than the landowner, the UST remediator shall provide a copy of the document which is to be filed in the chain of title for the property, by certified mail to the landowner.

(B) The language of the document to be filed in the chain of title shall include the following:

NOTICE OF ACCEPTABLE LAND USE(S) OF UNDERGROUND STORAGE TANK SITE

Owner of Record: (Landowner's Name)

Site Description: (Site Name and Legal Description)

The above-described real property, owned by (Landowner's Name) and located in the County of (County Name) and State of Missouri, is the site of an underground storage tank which was (Removed/Closed) on (Date). The site cleanup was accepted as complete by the Missouri Department of Natural Resources on (Date), in accordance with the applicable requirements of Title 10, Division 25, Chapters 10 through 12 of the Code of State Regulations which were in effect at the time of cleanup. The contaminant levels remaining on the site are suitable for (Commercial/Light Industrial/Heavy Industrial/ Other Specified) use.

In witness whereof I hereunto set my hand this ____ day of ___, 19__.

(Office)

(Name)

(Title)

(C) No person may substantially change the manner in which a site with a document filed in the chain of title under this section is used without the prior written approval of the director or the director's designee.

1. Requests for approval of change in use of real property must be submitted in writing to the director's office no less than sixty (60) days prior to the planned change in use of real property. In the event the director does not respond within sixty (60) days after the request is received, the request will be considered to be approved as submitted.

2. The director will evaluate the request to determine whether the change in use of real property is likely to result in increased exposure of persons or the environment or spread of contamination.

3. If the change in use of real property is not likely to result in increased exposure of persons or the environment or spread of contamination, the director shall provide written approval.

(D) When the director finds that a site which has had a document filed in the chain of title under this section has been further cleaned up to meet or exceed (lower levels than) the standards described in section (6) of this rule, the director shall direct the UST remediator to file a second document in the chain of title. The document shall include the language in subsection (8)(B) of this rule, and shall describe the land uses for which the new contaminant levels are suitable.]

AUTHORITY: [section 319.111, RSMo 2000, and] sections 319.109, 319.111, and 319.137, RSMo [Supp. 2010] 2016. This

rule originally filed as 10 CSR 20-10.068. Original rule filed Jan. 2, 1996, effective Aug. 30, 1996. Amended: Filed Jan. 14, 1997, effective Sept. 30, 1997. Moved and amended: Filed April 15, 2011, effective Dec. 30, 2011. Amended: Filed June 29, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: The Missouri Hazardous Waste Management Commission will hold a public hearing on this rule action and others beginning at 10:00 a.m. on September 13, 2018, at the Elm Street Conference Center, 1730 East Elm Street, Jefferson City, Missouri. Any interested person will have the opportunity to testify. Advance notice is not required. However, anyone who wants to make arrangements to testify may do so prior to the hearing by contacting the secretary of the Hazardous Waste Management Commission at (573) 751-2747.

Any person may submit written comments on this rule action. Interested persons, whether or not heard, may submit a written or email statement of their views until midnight on September 20, 2018. Written comments shall be sent to the director of the Hazardous Waste Program at PO Box 176, Jefferson City, MO 65102-0176. To be accepted, written comments must be postmarked by midnight on September 20, 2018. Email comments shall be sent to tim.eiken@dnr.mo.gov. Please direct all inquiries to the Rules Coordinator of the Hazardous Waste Program, at 1730 E. Elm, Jefferson City, MO 65102, telephone (573) 751-3176.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 50—Oil and Gas Council
Chapter 1—[Organization, Purpose,] General Procedures and Definitions

PROPOSED AMENDMENT

10 CSR 50-1.020 General Procedures. The council is amending the chapter title, sections (1), (2), (5), and (7), deleting sections (3) and (4), and renumbering as needed.

PURPOSE: This amendment removes duplication with sections 259.070, 259.140, 259.190, and 259.200, RSMo, improves readability, and removes unnecessary language pursuant to Executive Order 17-03 and the Red Tape Reduction Initiative.

(1) All rules promulgated *[shall be]* **apply** statewide *[in application]* unless otherwise specifically excepted by a written order of the council.

(2) *[No order or amendment, except in an emergency, shall be made by the council without a public hearing upon at least ten (10) days' notice. The public hearing shall be held at a time and place as may be prescribed by the council and any interested person shall be entitled to be heard.]* The notice requirements in *[this regulation]* **section 259.140, RSMo**, apply to each hearing arising under Chapter 259, RSMo, and implementing regulations heard by the council or any agent appointed by the council.

[(A) Notice of the hearing shall be published by the council in a newspaper of general circulation in the county where the land affected, or some part thereof, is situated. If the notice is applicable throughout the state, then it shall be published in a newspaper of general circulation which is published in Jefferson City.]

[(B)](A) A copy of the notice of the hearing *[shall]* **will** be mailed by the council to each person who has filed for the purpose of receiving notice. The notice *[shall]* **will** be mailed not less than ten (10) business days prior to the hearing date.

[(C)](B) *[In addition to notice required in subsection (2)(A), t/*The council also *[shall]* **will** provide notice to any person whose property interests may be affected by the outcome of the hearing.

[(3) When the council determines an emergency requiring immediate action exists, the council is authorized to issue an emergency order without notice of hearing, which shall be effective when issued. No emergency order shall remain effective for more than fifteen (15) calendar days.

(4) The department or its authorized representatives shall have the authority to enter property, with the consent of the owner or operator, to conduct investigations or inspections as are consistent with the intent of Chapter 259, RSMo.]

[(5)](3) The council, after a hearing as provided by law, may order an operation to cease or wells to be plugged upon a finding that any provisions of the laws, rules, or conditions of the council **or state geologist** have been violated or that any fraud, deceit, or misrepresentation was made to obtain the approval of a permit. Appeals of any decision of the council may be made as provided by law.

[(6)](4) Information submitted pursuant to Chapter 259, RSMo, and implementing regulations shall use Missouri nomenclature.

[(7)](5) Confidentiality. Information gathered pursuant to Chapter 259, RSMo, and implementing regulations is public record pursuant to the Missouri Sunshine law, Chapter 610, RSMo. Confidentiality may be granted upon request, in accordance with section 640.155.1, RSMo. Cancelled permits are not considered confidential.

(A) If a written request for confidentiality is made to the state geologist within one hundred twenty (120) days of the spud date or the date of commencement of recompletion of the well, all information, samples, or cores filed *[as required in]* **per 10 CSR 50-2.050 [shall]** **will** be held in confidential custody for an initial period of one (1) year from the written request.

(B) All rights to confidentiality shall be lost if the filings are not timely, as provided in 10 CSR 50-2.050, or if the request for confidentiality is not timely, as provided in subsection *[(7)](5)(A)*.

(C) Samples, cores, or information may be released before the expiration of the one- (1-) year period only upon written approval of the operator.

(D) If a request for an extension is made at least thirty (30) days before the expiration of the initial one- (1-) year period, the period of confidentiality may be extended for one (1) additional year.

AUTHORITY: sections 259.070, *[and]* **259.140**, 259.190, *and* **259.200**, *[RSMo Supp. 2015, and sections 259.140 and 259.200,]* **RSMo [2000] 2016**. Original rule filed Oct. 11, 1966, effective Oct. 21, 1966. For intervening history, please consult the **Code of State Regulations**. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Kimberly Ward at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to kimberly.ward@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 13, 2018 at

5:00 p.m. A public hearing is scheduled for 10 a.m., September 6, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 50—Oil and Gas Council
Chapter 1—[Organization, Purpose,] General Procedures and Definitions

PROPOSED AMENDMENT

10 CSR 50-1.030 Definitions. The council is amending the chapter title, the rule purpose, sections (1) and (2), and renumbering as needed.

PURPOSE: This amendment removes duplication with section 259.050, RSMo, adds definitions for observation wells and private domestic consumption, improves readability, and removes unnecessary language pursuant to Executive Order 17-03 and the Red Tape Reduction Initiative.

PURPOSE: This rule provides the definitions for terms used in 10 CSR 50 that are not defined in section 259.050, RSMo.

(1) The terms used in 10 CSR 50 *[shall]* have the meanings set forth in section 259.050, RSMo, or this rule, unless the context of the term clearly indicates otherwise.

(C) Terms beginning with the letter C.

1. Casing, the impervious, durable, tubular materials used to line a wellbore.

2. Casinghead gas, gas produced that was in solution with oil in its original state in the reservoir.

3. Cement, portland cement or a blend of portland cement.

4. Coalbed natural gas, natural gas produced from either coal seams or associated shale.

5. Commercial well, a well from which oil or gas is recovered and sold, traded, or otherwise used for profit.

6. Common source of supply, synonymous with “pool” as defined in *[this rule]* Chapter 259, RSMo.

7. Confining strata, geologic stratum or strata that serve as a barrier between water-, oil-, or gas-bearing strata.

8. Core, a continuous section of geologic materials recovered during drilling.

9. Corrective action, remedial action on any well to prevent the migration of fluids from the surface or from one (1) stratum to another.

10. Correlative rights, the right of each owner or operator in a pool to obtain that owner’s or operator’s just and equitable share of the oil or gas resource, or an economic equivalent of that share of the resource, produced in a manner or amount that will not have any of the following effects:

A. Damage the reservoir;

B. Take an undue proportion of the obtainable oil or gas; or

C. Cause undue drainage between developed leases.

11. Council, the State Oil and Gas Council established by section 259.010, RSMo.

(D) Terms beginning with the letter D.

[1. Department, the Department of Natural Resources.]

[2.]1. [Disposal well, an injection well used to place produced water, non-usable gas or other liquid or gaseous waste associated with the production of oil or gas or both into an injection zone and is not used for enhanced recovery.] (Reserved)

(F) Terms beginning with the letter F.

[1. Field, the general area underlain by one (1) or more pools.]

[2.]1. Fluid, any material or substance which flows or moves

whether in a semi-solid, liquid, sludge, or gaseous state.

[3.]2. Formation water, water that occurs naturally within the pores of a geologic formation or stratum.

(G) Terms beginning with the letter G.

1. [Gas, all natural gas and all other fluid hydrocarbons which are produced at the wellhead and not herein below defined as oil.] (Reserved)

(M) Terms beginning with the letter M.

1. Mechanical integrity, a well [shall be considered to have] has mechanical integrity if there is no significant leakage in the casing, tubing, or packer; and there is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the wellbore.

2. Missouri nomenclature, Missouri-specific geologic terminology as provided by the state geologist including, but not limited to, names of geologic strata, pools, and geologic features.

3. Multiple completion, the completion of any well that permits production from two (2) or more pools that are completely segregated by confining strata.

(N) Terms beginning with the letter N.

1. [Non-commercial gas well, a gas well drilled for the sole purpose of providing gas for private domestic consumption by the owner and not for resale or trade.] (Reserved)

(O) Terms beginning with the letter O.

1. [Oil, crude petroleum oil and other hydrocarbons regardless of gravity which are produced at the wellhead in liquid form and the liquid hydrocarbons known as distillate or condensate recovered or extracted from gas, other than gas produced in association with oil and commonly known as casinghead gas. The term shall also include hydrocarbons that do not flow to a wellhead but are produced by other means, including those contained in oil-shale and oil-sand.] Observation well, a well that is used to monitor the operational integrity and conditions of oil, gas, and storage operations, including physical or chemical parameters of a reservoir or geologic formation or strata, and is not used currently as a production, injection, disposal, or water well.

2. Oil and Gas Remedial Fund, the fund established by section 259.190.5, RSMo into which forfeited bond monies and proceeds from the sale of illegal oil, illegal gas, and illegal product are deposited, which is to be used for plugging abandoned wells as provided for in 10 CSR 50-2.060(3)(F).

3. Oil and Gas Resources Fund, the fund established by section 259.052, RSMo, into which all gifts, donations, transfers, moneys appropriated by the General Assembly, permit application fees, operating fees, closure fees, late fees, severance fees, and bequests are deposited, which is to be used to administer the provisions of Chapter 259, RSMo, and implementing regulations, and to collect, process, manage, interpret, and distribute geologic and hydrologic resource information pertaining to oil and gas potential.

4. Open well, a well that has not been plugged including, but not limited to, abandoned, operating, or shut-in wells.

5. Operator, a person who drills, maintains, operates, or controls wells associated with oil or gas production, storage, or injection projects.

[6. Owner, the person who has the right to drill into and produce from a pool and to appropriate the oil or gas he produced therefrom either for himself or others or for himself and others.]

(P) Terms beginning with the letter P.

1. Person, any individual, partnership, co-partnership, firm, company, public or private corporation, association, joint stock company, trust, estate, governmental or political subdivision, or any other legal entity.

2. Plugged well, a well that has been filled or partially filled with cement or other materials to prevent the migration of fluids within the well.

[3. Pool, an underground reservoir containing a common

accumulation of oil or gas or both; each zone of a structure which is completely separated from any other zone in the same structure is a "pool," as that term is used in Chapter 259, RSMo, and in these regulations.]

[4.]3. Pooling, the contractual agreement of those holding the rights to mineral interests within a single spacing unit for primary production, whether that agreement is voluntary or by order of the council, to produce oil or gas or both from that unit.

[5.]4. Primary production, the process of recovery of oil or gas from a pool in which one (1) well is capable of efficiently draining the pool or portion thereof that resides within the confines of the spacing unit and the drainage of oil, gas, or formation water into the well occurs naturally.

5. Private domestic consumption, gas used from an on-site well(s) for the sole purpose of providing gas for a private dwelling or business and not for resale or trade.

6. Produced water, formation water that is associated with the production of oil or gas and either requires disposal or is used as part of an enhanced recovery project.

[7. *Product, any commodity made from oil or gas and includes refined crude oil, crude tops, topped crude, processed crude, processed crude petroleum, residue from crude petroleum, cracking stock, uncracked fuel oil, fuel oil, treated crude oil, residuum, gas oil, casinghead gasoline, natural gas gasoline, kerosene, benzene, wash oil, waste oil, blended gasoline, lubricating oil, blends or mixtures of oil with one (1) or more liquid products or by-products derived from oil or gas, and blends or mixtures of two (2) or more liquid products or by-products, derived from oil or gas whether herein enumerated or not.*]

[8.]7. Production unit, an uninterrupted block of acreage of any size and any shape that has a definite outer boundary and in which wells may be drilled for enhanced recovery. The acreage that composes a production unit may include default spacing units, acreage for which spacing units have or have not been explicitly ordered by the state geologist or council, pooled or non-pooled mineral acreage, and all or parts of past and present production units.

[9.]8. Production well, any well used for recovery of oil or gas or both.

(R) Terms beginning with the letter R.

[1. *Reasonable market demand, the demand for oil or gas for reasonable current requirements for consumption and use within and without the state, together with such quantities as are reasonably necessary for building up or maintaining reasonable working stocks and reasonable reserves of oil or gas or product.*]

[2.]1. Recompletion, the process of reworking or repairing a well after its initial well completion.

[3.]2. Reference well, a well used to collect data to establish a maximum injection pressure as approved by the state geologist.

(W) Terms beginning with the letter W.

[1. *Waste, includes, but is not limited to:*

A. *Physical waste, as that term is generally understood in the oil and gas industry, but not including unavoidable or accidental waste;*

B. *The inefficient, excessive, or improper use of, or the unnecessary dissipation of, reservoir energy;*

C. *The location, spacing, drilling, equipping, operating, or producing of any oil or gas well or wells in a manner which causes, or tends to cause, reduction in the quantity of oil or gas ultimately recoverable from a pool under prudent and proper operations, or which causes or tends to cause unnecessary or excessive surface loss or destruction of oil or gas;*

D. *The inefficient storing of oil or gas;*

E. *The production of oil or gas in excess of transportation or marketing facilities or in excess of reasonable market demand; and*

F. *Through negligence, the unnecessary or excessive*

surface loss or destruction of oil or gas resulting from evaporation, seepage, leakage, or deliberate combustion.]

[2.]1. Waters of the state, [shall have] **has** the same meaning as defined in the Missouri Clean Water Law, section 644.016, RSMo.

[3.]2. Well, [any hole drilled in the earth for, or in connection with, the exploration, discovery, or recovery of oil or gas, or for or in connection with the underground storage of gas in natural formation, or for or in connection with the disposal of salt water, nonusable gas, or other waste accompanying the production of oil or gas] **has the meaning as defined in section 259.050(16)**. Wells drilled for the production of water are regulated by the Water Well Drillers' Act, Chapter 256, RSMo, and the implementing Missouri Well Construction rules, 10 CSR 23. A well includes, but is not limited to, the following:

A. Disposal well;

B. Enhanced recovery injection well;

C. Horizontal well;

D. Injection well;

E. **Observation well;**

[E.]F. Production well;

[F.]G. Seismic shot hole;

[G.]H. Storage well; or

[H.]I. Stratigraphic test well.

[4.]3. Well stimulation treatment, a treatment of a well designed to enhance oil and gas production or recovery by increasing the secondary permeability of the geologic strata. Well stimulation is a short-term and non-continual process for the purposes of opening and stimulating channels for the flow of oil or gas or both. Examples of well stimulation treatments include hydraulic fracturing, acid fracturing, and acid matrix stimulation. Well stimulation treatment does not include routine well cleanout work; routine well maintenance; routine treatment for the purpose of removal of geologic strata damage due to drilling; bottom hole pressure surveys; routine activities that do not affect the integrity of the well or the geologic strata; the removal of scale or precipitate from the perforations, casing, or tubing; or a treatment that does not penetrate into the geologic strata more than thirty-six (36) inches from the wellbore.

[5.]4. Whipstock, a long wedge-shaped steel device or casing that uses an inclined plane to cause the bit to deflect from the original borehole at a slight angle, sometimes used in an oil or gas well to control directional drilling, to straighten crooked boreholes, or to sidetrack to avoid unretrieved items left in a well.

(2) All other words used in this rule [shall be given] **have** their usual customary and accepted meaning, and all words of a technical nature, or specific to the oil and gas industry, [shall] **will** be given that meaning which is generally accepted in the oil and gas industry.

AUTHORITY: sections 259.050, 259.070, **259.140**, and 259.190, [RSMo Supp. 2015, and section 259.140.] RSMo [2000] **2016**. Original rule filed Oct. 11, 1966, effective Oct. 22, 1966. For intervening history, please consult the **Code of State Regulations**. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Kimberly Ward at PO Box 250, Ill Fairgrounds Rd., Rolla, MO 65402 or via email to kimberly.ward@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 13, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 6,

2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 50—Oil and Gas Council
Chapter 1—[Organization, Purpose,] General Procedures and Definitions

PROPOSED AMENDMENT

10 CSR 50-1.050 Assessment of Costs. The council is amending the chapter title and sections (1) and (2).

PURPOSE: This amendment improves readability, clarifies requirements, and removes unnecessary language pursuant to Executive Order 17-03 and the Red Tape Reduction Initiative.

(1) Beginning January 1, 2017, the following fees shall be assessed and deposited in the Oil and Gas Resources Fund:

(A) A fee of two hundred fifty dollars (\$250) *[shall be]* paid upon the submittal of an **initial or renewal** application for an operator license; except *[that an applicant for a license who solely operates a non-commercial gas well shall pay a fee of fifty dollars (\$50)] as provided in subsection (B);*

(B) A fee of *[two hundred]* fifty dollars (\$*[2]*50) *[shall be]* paid **upon submittal of an initial or renewal application for an operator license by [each operator upon submittal of an operator license renewal form; except that an operator] an applicant** who solely operates a non-commercial gas well *[shall pay a fee of fifty dollars (\$50)];*

(C) A fee of one hundred dollars (\$100) *[shall be]* paid upon submittal of an application for a permit to drill, deepen, plug-back, or recomplete as follows:

1. Any new application for permit to drill, deepen, plug-back, or recomplete any well;

2. Any application for modification to the permit to drill, deepen, plug-back, or recomplete; or

3. Blanket requests to drill, deepen, plug-back, or recomplete wells proposed to depths no greater than one thousand five hundred feet (1500');

(D) A fee of one hundred dollars (\$100) *[shall be]* paid upon submittal of an application for a permit to inject as follows:

1. Any new application for a permit to inject in any well; or

2. Any application for modification to the initial injection well permit including, but not limited to, an increase in the maximum injection pressure and/or the maximum injection rate;

3. No fee *[shall]* **will** be assessed for a *[notice of permit]* modification **to an injection permit** as specified in 10 CSR 50-2.055(5)(B);

(E) A fee of twenty-five dollars (\$25) *[shall be]* paid upon submittal of an application for extension of the shut-in status of a well;

(F) A fee of fifty dollars (\$50) *[shall be]* paid upon submittal of a plugging record for each well plugged;

(G) A fee of sixty cents (\$.60) on each barrel of oil sold or marketed each month *[shall be]* assessed to each operator. The fee and assessment *[shall]* apply only to the first purchase of oil from the operator and *[shall]* **will** be collected and submitted by the first purchaser of oil;

(H) A fee of seven and one-tenth cents (\$.071) on each one thousand (1,000) cubic feet of gas sold or marketed each month *[shall be]* assessed to each operator. The charge and assessment *[shall]* apply only to the first purchase of gas from the operator and *[shall]* **will** be collected and submitted by the first purchaser of gas;

(I) *[In the event any required form or report is not submitted per Chapter 259, RSMo, or implementing regulations, a]* **A** late fee of no more than one hundred dollars (\$100) per month *[shall be]* assessed against the responsible party*[, and shall be*

assessed] each month until the form or report has been submitted. In no case, however, will a late fee exceed one thousand two hundred dollars (\$1,200) per violation for each well.

(2) Fee nonrefundable. Once paid, each fee *[shall be]* is nonrefundable.

AUTHORITY: sections 259.052 and 259.080, RSMo [Supp. 2015] 2016. Original rule filed Sept. 15, 2015, effective March 30, 2016. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Kimberly Ward at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to kimberly.ward@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 13, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 6, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 50—Oil and Gas Council
Chapter 2—Oil and Gas Drilling and Production

PROPOSED AMENDMENT

10 CSR 50-2.010 Operator License. The council is amending the rule purpose and sections (1), (2), (3), (4), and (6).

PURPOSE: This amendment removes tank signage requirements from paragraph (6)(A)7. and moves them into 10 CSR 50-2.065(1), improves readability, clarifies requirements, and removes unnecessary language pursuant to Executive Order 17-03 and the Red Tape Reduction Initiative.

*PURPOSE: This rule provides for the filing of information that identifies those responsible for oil and gas exploration, production, or related industry activities regulated by the council. The operator license is *[required]* necessary in order to properly process bonding, well permitting, producing, plugging, and other council regulated activities and to make sure that the person making application is, in fact, authorized to represent a person, firm, or corporation.*

(1) No person shall engage in oil or gas operations pursuant to Chapter 259, RSMo, and implementing regulations without first obtaining or renewing an operator license from the department/. *Each operator of a well or gas storage facility shall maintain a current operator license],* even if the well or storage facility is shut in or idle.

(2) Application for an operator license.

(A) An application for an operator license shall be **completed in full on a form provided by the department** and submitted, **along with the applicable fee pursuant to 10 CSR 50-1.050,** to the state geologist for approval. *[This application shall be submitted on a form provided by the department along with the fee required pursuant to 10 CSR 50-1.050 and shall be completed in full.]*

(B) The state geologist *[shall]* **will** review the application for operator license and, within fifteen (15) business days, determine if the application is in proper form and if the requirements of Chapter 259, RSMo, and implementing regulations are met. If the application is incomplete or lacking *[required]* information, forms, or fees, the state geologist *[shall]* **will** notify the applicant and suspend the application process. When the *[required]* **missing** form, information, or fee is submitted by the applicant and received by the state geologist, the fifteen (15) business day review period will begin anew. If the state geologist has not received the missing or incomplete *[required]* application information or fee within thirty (30) days after notification of the applicant, the application *[shall]* **will** be considered null and void and the applicant must reapply by submitting a new application for an operator license along with the *[required]* **associated** fee.

1. If the state geologist finds that the application is in good form, that all requirements of the application have been met, and that Chapter 259, RSMo, and implementing regulations are being met, the state geologist *[shall]* **will** issue the operator license.

2. If the state geologist determines either that the application is not in proper form, that the applicant failed to submit the applicable fees, or that Chapter 259, RSMo, and implementing regulations are not being met, *[the state geologist shall deny]* the application **will be denied**.

3. If the state geologist determines that the applicant is in violation of any provision of Chapter 259, RSMo, or implementing regulations, the state geologist may deny the application.

4. If the state geologist has not taken action by the prescribed fifteen (15) business day review period, the application shall be considered denied.

(3) License Renewal.

(A) An operator license issued pursuant to this section *[shall]* expires on January 1 of the year immediately following issuance of the license. An operator may apply to renew the operator's license by submitting an application to the state geologist for approval. This application shall be **completed in full and** submitted on a form provided by the department, along with the fee *[required]* pursuant to 10 CSR 50-1.050, on or before January 1 each year *[and shall be completed in full]*.

(B) A late fee pursuant to 10 CSR 50-1.050 *[shall be paid]* **will be assessed** if the renewal is submitted *[within thirty (30) calendar days following the expiration date. If a license has been expired more than thirty (30) calendar days, the licensee must reapply by submitting a new application for an operator license along with the required fee] after the expiration date.*

(4) Suspension or revocation of operator license.

(B) The order of suspension or revocation shall state the reason(s) for suspension or revocation, the effective date of the suspension or revocation, and the conditions under which the suspension or revocation would be rescinded. The order *[shall]* **will** be sent registered or certified mail to the licensee's last known address. The licensee may appeal the suspension or revocation as provided in 10 CSR 50-1.040(3).

(6) *[The operator of any open well shall comply with Chapter 259, RSMo, and implementing regulations.]* Any open well shall not be transferred from one (1) operator to another operator without approval of the state geologist. **No less than thirty (30) calendar days prior to the planned transfer, [A/an operator (transferor) shall submit to the state geologist, on a form provided by the department, a request to transfer any open well(s) [to a new operator (transferee). The request shall be submitted on a form provided by the department no less than thirty (30) calendar days prior to the planned transfer]. Any such request may be denied if the state geologist determines that the [operator has not submitted all the required] submitted information is incomplete.**

(A) The state geologist *[shall]* **will** review the completed transfer request and, within fifteen (15) business days, approve or deny the request based upon the following *[conditions]* **requirements**:

1. The transfer of the well(s) *[must be]* is agreed upon by both the transferor and by the transferee;

2. The transferee *[must have]* **holds** a current operator license issued by the state geologist;

3. The transferee *[must have]* **has** bonding *[as required in]* pursuant to 10 CSR 50-2.020 in place *[prior to transfer]*;

4. *[The transferor shall provide a]* A list of American Petroleum Institute (API) numbers for all open wells on the lease, spacing unit, production unit, or gas storage facility **submitted** with the *[notice of]* **request to transfer; and**

[5. Transfers shall not be made to any person who has not complied with the provisions of 10 CSR 50-2.010;]

[6.] 5. The transferor may be required by the state geologist to conduct a mechanical integrity test as a condition of the transfer; **and**.

[7. Within ninety (90) days of any transfer, the transferee shall change the tank battery identification sign provided for in 10 CSR 50-2.065(1) to include the new operator information.]

(B) If the *[form]* **request to transfer** is incomplete *[or lacking required information]*, the state geologist *[shall]* **will** notify the operator and suspend the review process. When *[the completed form or required information]* **all necessary information** is *[submitted by the operator and]* received by the state geologist, the fifteen (15) business day review period will begin anew. If the state geologist has not received the *[missing or incomplete required]* **necessary** information within thirty (30) days after notification of the operator, the request *[shall]* **will** be considered null and void and the operator must submit a new transfer request.

AUTHORITY: section 259.070, RSMo [Supp. 2015] 2016. Original rule filed Oct. 11, 1966, effective Oct. 21, 1966. For intervening history, please consult the Code of State Regulations. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: *Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Kimberly Ward at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to kimberly.ward@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 13, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 6, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.*

Title 10—DEPARTMENT OF NATURAL RESOURCES Division 50—Oil and Gas Council Chapter 2—Oil and Gas Drilling and Production

PROPOSED AMENDMENT

10 CSR 50-2.020 Bonds. The council is amending the rule purpose and sections (1), (2), (3), (5), and (6).

PURPOSE: This amendment clarifies the distinction between bonds and financial assurance instruments, removes duplication with chapter 259, RSMo, improves readability, consolidates duplicative language particularly for notification requirements, clarifies requirements

including those for bond release, and removes unnecessary language pursuant to Executive Order 17-03 and the Red Tape Reduction Initiative.

PURPOSE: Bonding is [required of an operator] necessary before an operator commencing oil or gas drilling or operations to insure compliance with the provisions of Chapter 259, RSMo, and the rules of the council, specifically with reference to the proper plugging for abandonment of a well(s).

(1) Prior to commencement of drilling or other operations, the operator commencing such drilling or operations shall make, or cause to be made, for each well a good and sufficient bond [for each well. The bond shall be] that—

(A) Is secured by an approved financial assurance instrument payable to the state of Missouri, conditioned upon the performance of the duty to comply with all of the laws of the state and the rules and orders of the council[.];

(B) [The bond shall be filed with] Is submitted on a form provided by the department and approved by the state geologist[.]; and

(C) [This bond shall r]Remains in full force and effect until a letter of release is issued by the state geologist or the bond is forfeited as provided in section (6) below. [The state geologist shall issue the letter of release after plugging of the well, or after a new bond is filed by a successor and appropriate well transfer form submitted to the state geologist pursuant to 10 CSR 50-2.010(6).]

(2) Bond Amounts. [Required b]Bond amounts, [shall be] as determined by the council, [and] shall be no less than the following amounts:

MINIMUM SINGLE WELL BOND
Depth of Well

From	To	Amount
0'	500'	\$1,100
501'	1000'	\$2,200
1001'	2000'	\$3,300
2001'	5000'	\$4,400
5001'	—	\$5,500
		plus \$2/foot beyond 5001 feet

Bonds for horizontal wells shall be based on the total measured length of the wellbore from the surface to the depth of the deepest producing horizon.

MINIMUM BLANKET WELL BOND
Depth of Well

From	To	Amount	Number of Open Wells/bond
0'	800'	\$22,000	40 wells
801'	1500'	\$25,000	10 wells

Wells greater than one thousand five hundred feet (1500') in depth must be bonded individually by a single well bond.

(3) [Types of bonds] **Financial assurance instruments.** The state geologist may accept as financial assurance instruments surety bonds, [personal bonds secured by] certificates of deposit, and [personal bonds secured by] irrevocable letters of credit. [The bond shall be submitted on the appropriate form. When the bond is filed, the state geologist shall review the bond and if the bond is in proper form, the state geologist shall accept the bond with the conditions which may be required by the council or by rule. If the bond is determined to be insufficient

or not in proper form, the state geologist shall notify the operator. No drilling or operation shall commence or continue unless there is a sufficient bond on file with the state geologist.]

(A) Surety bonds shall be subject to the following conditions:

1. Only irrevocable surety bonds shall be accepted. No bond of a surety company shall be cancelled for any reason whatsoever, including, but not limited to, nonpayment of premium, bankruptcy, or insolvency of the operator or issuance of notices of violations or cessation orders and assessment of penalties with respect to the operations covered by the bond, except that surety bond coverage for wells not drilled may be cancelled if the surety provides written notification and the state geologist is in agreement. The state geologist shall advise the surety, within thirty (30) days after receipt of a notice to cancel bond, whether the bond may be cancelled;

2. The surety shall be licensed to conduct a surety business in Missouri; and

3. Both the surety and the operator shall be primarily liable for completion of any remedial actions, including, but not limited to, well plugging, with the surety's liability being limited to the amount of the bond[.];

[4. The bond shall provide that—

A. The surety will give prompt notice to the operator and the state geologist of any change in name or address of the surety company, or any notice received or action filed alleging the insolvency or bankruptcy of the surety or alleging any violations of regulatory requirements which could result in suspension or revocation of the surety's license to do business; and

B. In the event the surety becomes unable to fulfill its obligation under the bond for any reason, notice shall be given immediately to the operator and the state geologist; and

5. The bond shall provide a mechanism for a surety company to give prompt notice to the state geologist and the operator of any change in name or address of the surety company, or any action filed alleging the insolvency or bankruptcy of the surety company, or the operator, or alleging any violations which would result in suspension or revocation of the surety license to do business. Upon the incapacity of a surety by reason of bankruptcy or insolvency, or suspension or revocation of its license, the operator shall be deemed to be without bond coverage in violation of section (1) and shall promptly notify the state geologist. The state geologist, upon notification of the surety's bankruptcy or insolvency, or suspension or revocation of its license, shall issue a notice of violation against any operator who is without bond coverage. The notice shall specify a thirty- (30-) day period to replace bond coverage. If the bond is not replaced in thirty (30) days, an order shall be issued by the state geologist requiring immediate cessation of operations. Operations shall not resume until the state geologist has determined that an acceptable bond had been posted.]

(B) [Personal bonds secured by c]Certificates of deposit shall be subject to the following conditions:

1. The certificate(s) shall be in the amount of the bond or in an amount greater than the bond and shall be made payable to or assigned to the state of Missouri, both in writing and upon the records of the institution issuing the certificates, and shall be automatically renewable at the end of the term of the certificate. If assigned, institutions issuing the certificate(s) waive all rights of set off or liens against the certificate(s);

2. No single certificate of deposit shall exceed the sum of two hundred fifty thousand dollars (\$250,000) nor shall any permittee submit certificates of deposit aggregating more than two hundred fifty thousand dollars (\$250,000) or the maximum insurable amount as determined by the Federal Deposit Insurance Corporation from a single institution. The institution issuing the certificate of deposit

must be insured by the Federal Deposit Insurance Corporation (FDIC);

3. Any interest on the certificates of deposit shall be made payable to the operator; **and**

4. The certificate of deposit shall be kept until the bond is released by the state geologist[;].

[5. *The institution issuing the certificate(s) of deposit for bonding purposes shall give prompt notice to the state geologist and the operator of any change in name or address of the institution, and any insolvency or bankruptcy of the institution; and*

6. *The bond shall provide a mechanism for an institution to give prompt notice to the state geologist and the operator of any change in name or address of the institution, any action filed alleging the insolvency or bankruptcy of the institution or the operator, or alleging any violations which would result in suspension or revocation of the institution charter or license to do business. Upon the incapacity of any institution by reason of insolvency or bankruptcy, or suspension or revocation of its charter or license, the operator shall be deemed to be without bond coverage in violation of section (1). The state geologist, upon notification of the institution's bankruptcy or insolvency, or suspension or revocation of its charter or license, shall issue a notice of violation against any operator who is without bond coverage. The notice shall specify a thirty- (30-) day period to replace bond coverage. If the bond is not replaced in thirty (30) days, an order shall be issued by the state geologist requiring immediate cessation of operations. Operations shall not resume until the state geologist has determined that an acceptable bond has been posted.]*

(C) *[Personal bonds secured by]*Letters of credit shall be subject to the following conditions:

1. The letter of credit shall be no less than the face amount of the bond and shall be irrevocable. A letter of credit used as security shall be forfeited and *[shall be]* collected by the state geologist if not replaced by other suitable bond or letter of credit at least thirty (30) days before its expiration date;

2. The beneficiary of the letter of credit shall be the state of Missouri;

3. The letter of credit shall be issued by a bank authorized to do business in the United States. If the issuing bank is located in another state, a bank located in Missouri must confirm the letter of credit. Confirmations shall be irrevocable and on a form provided by the department;

4. The letter of credit shall be governed by Missouri law. The Uniform Customs and Practice for Documentary Credits, fixed by the International Chamber of Commerce, shall not apply;

5. The letter of credit shall provide that the state geologist may draw upon the credit by making a demand for payment, accompanied by his/her statement that the operator's bond has been declared forfeited; **and**

6. The issuer of a letter of credit or confirmation shall warrant that the issuance will not constitute a violation of any statute or regulation which limits the amount of loans or other credits which can be extended to any single borrower or customer or which limits the aggregate amount of liabilities which the issuer may incur at any one (1) time from issuance of letters of credit and acceptances[;].

(D) Notification Requirements.

1. **In the event the surety company becomes unable to fulfill its obligation under the bond for any reason, notice shall be given immediately to the operator and the state geologist.**

[7.]2. The *[bank]* surety company or financial institution issuing the *[letter(s) of credit]* financial assurance instrument for bonding purposes shall give prompt notice to the state geologist and the operator of any change in name or address of the institution, or any insolvency or bankruptcy of the *[bank]* institution or any notice received or action filed alleging the insolvency or bankruptcy of

the institution or alleging any violations of regulatory requirements which could result in suspension or revocation of the institution's license to do business[; and].

[8.]3. The *[bond]* financial assurance instrument shall provide a mechanism for a *[bank]* surety company or financial institution to give *[prompt]* notice *[to the state geologist and the operator of any change in name or address of the institution, any action filed alleging the insolvency or bankruptcy of the bank or the operator, or alleging any violations which would result in suspension or revocation of the bank's charter or license to do business.]* per paragraph 2. above.

4. Upon the incapacity of any *[bank]* surety company or financial institution by reason of insolvency or bankruptcy, or suspension or revocation of its charter or license, the operator shall be deemed to be without bond coverage in violation of section (1). The state geologist, upon notification of the *[bank]* institution's bankruptcy or insolvency, or suspension or revocation of its charter or license, shall issue a notice of violation against any operator who is without bond coverage. The notice shall specify a thirty- (30-) day period to replace bond coverage. If the *[bond]* financial assurance instrument is not replaced in thirty (30) days, an order shall be issued by the state geologist requiring immediate cessation of operations. Operations shall not resume until the state geologist has determined that an acceptable bond secured by an approved financial assurance instrument has been posted.

(5) Bond Release. Application for release of a bond, and any instruments securing the bond, shall be made by written notice to the state geologist who *[shall]* will issue the letter of release *[the bond]* after plugging of the well, or after a new bond, and any instruments securing the bond, is filed by a successor and an appropriate well transfer form is submitted pursuant to 10 CSR 50-2.010(6), and if the requirements of Chapter 259, RSMo, and implementing regulations have been met.

(6) Bond Forfeiture.

(D) The entry of an order declaring a bond forfeited shall automatically authorize the state geologist, with the assistance of the attorney general, if necessary, to take whatever actions are necessary to collect the forfeited bond and any instruments securing the bond. *[The forfeited bond shall be deposited into the Oil and Gas Remedial Fund and utilized according to 10 CSR 50-2.060(3)(F).]*

AUTHORITY: section 259.070, RSMo [Supp. 2015] 2016. Original rule filed Oct. 11, 1966, effective Oct. 21, 1966. For intervening history, please consult the Code of State Regulations. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

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Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 50—Oil and Gas Council
Chapter 2—Oil and Gas Drilling and Production

PROPOSED AMENDMENT

10 CSR 50-2.030 Application for Permit to Drill, Deepen, Plug-Back, or Recomplete. The council is amending sections (1), (2), (3), (5), (6), and (9)

PURPOSE: This amendment improves readability by removing unnecessary restrictive language, removing the requirement for blanket drilling permit requests to be part of an established production unit, and allows the operator the ability to better manage prospective resource exploration.

(1) Prior to commencement of operations, application for a permit to drill, deepen, plug-back, or recomplete any well shall be submitted to and approved by the state geologist. *[The required operator license and bond must be on file in the office of the state geologist or must accompany the application.]*

(2) The application for a permit to drill, deepen, plug-back, or recomplete shall be **completed in full and** submitted on a form provided by the department along with the **applicable fee [required]** pursuant to 10 CSR 50-1.050 *[and shall be completed in full]*.

(3) Well location.

[(3)](A) All applications shall *[be accompanied by a completed well location form and]* **include** an accurate well location map/.

(A) The location map shall showing the following:

1. Approximate location of the well within the section or quarter section;
2. Approximate distance to the nearest existing or proposed well;
3. Approximate distance to the nearest perceived spacing unit line or production unit line;
4. Names and addresses of the owners of the property on which the well is located;
5. A north arrow and a scale; and
6. For a horizontal well, the proposed location of the wellbore's path and terminus.

(B) The proposed well location shall be provided using latitude and longitude based on the North American Datum of 1983 (NAD 83) and expressed in the decimal form to the fifth place. Any well that is found to not meet the minimum location requirements upon completion may be ordered to be plugged by the state geologist.

(C) A drilling location may be moved up to fifty feet (50') from the approved location, if the new location does not violate spacing or setback requirements, without filing a revised permit application. Such changed location shall be noted on the well completion report.

(5) Blanket permits to drill, deepen, plug-back, or recomplete.

[(5)](A) An operator engaged in drilling wells to depths no greater than one thousand five hundred feet (1500') may request that the state geologist approve prospective well locations on a blanket basis. The **applicable fee [required]** pursuant to 10 CSR 50-1.050(1)(C)3. shall be submitted with the request. *[Blanket requests must be associated with an established production unit.]* Bonding must be in place for all proposed wells in the blanket request. The request shall be accompanied by a plat of the entire production unit/ **that—**

1. *[indicating]* **Indicates** the unit boundaries, the location of, and identifying by number, all wells which have been drilled or are proposed/;
2. *[using]* Uses appropriate symbols to distinguish between them; **and**
3. *[the plat shall c/]*Conforms to the *[scale and distance]* requirements specified in section (3) of this rule.

(B) In the event the state geologist approves the blanket requests, the approved locations may be drilled in the operator's order of preference/ *provided that a/*. **Locations of stratigraphic test wells may be moved within the established production unit at the operator's discretion.** A permit application and **applicable fee [required]** pursuant to 10 CSR 50-1.050(1)(C)1. for each well commenced shall be sent to the state geologist within twenty-four (24) hours, or the next business day, after the commencement of drilling of each well.

(6) Upon application for a permit to drill, deepen, plug-back, or recomplete, the state geologist *[shall]* **will** review the application and, within fifteen (15) business days, determine if the application is in proper form and if the requirements of Chapter 259, RSMo, and implementing regulations are met. If the application is incomplete or lacking *[required]* information, forms, or fees, the state geologist *[shall]* **will** notify the operator and suspend the application process. When the *[required]* **missing** form, information, or fee is submitted by the operator and received by the state geologist, the fifteen (15) business day review period will begin anew. If the state geologist has not received the missing or incomplete *[required]* application information or fee within thirty (30) days after notification of the operator, the application *[shall]* **will** be considered null and void and the operator must reapply by submitting a new application for a permit to drill, deepen, plug-back, or recomplete, along with the *[required]* **associated fee.**

(A) If the state geologist finds that the application is in good form, that all requirements of the application have been met, and that Chapter 259, RSMo, and implementing regulations are being met, the state geologist *[shall]* **will** issue the permit.

(B) If the state geologist determines either that the application is not in proper form, that the operator failed to submit the applicable fees, or that Chapter 259, RSMo, and implementing regulations are not being met, *[the state geologist shall deny]* the permit **will be denied.**

(9) Prior to any change or modification of a permit, or any change in the operation of a well subject to these regulations, the operator shall notify the state geologist, identifying the well name, location, the proposed change, and a full explanation of the nature of the change. An appropriately revised permit application or application for permit for well recompletion along with the **applicable fee [required]** pursuant to 10 CSR 50-1.050 shall be submitted to the state geologist for approval, except as provided in subsection (3)(C). No modification or change in operation *[shall]* **may** begin until the state geologist has reviewed and approved the revised application. The state geologist *[shall]* **will** review and respond to the notification within fifteen (15) business days. The review period *[shall]* **will** be suspended if additional information is necessary to effectively review the application. When the *[required]* **missing** form or information is submitted by the operator and received by the state geologist, the fifteen (15) business day review period will begin anew.

AUTHORITY: sections 259.060, 259.070, 259.080, and 259.140, [RSMo 2000, and sections 259.070 and 259.080,] RSMo [Supp. 2015] 2016. Original rule filed Oct. 11, 1966, effective Oct. 21, 1966. For intervening history, please consult the Code of State Regulations. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

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to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Kimberly Ward at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to kimberly.ward@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 13, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 6, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 50—Oil and Gas Council
Chapter 2—Oil and Gas Drilling and Production**

PROPOSED AMENDMENT

10 CSR 50-2.040 Drilling and Completion. The council is amending sections (3), (4), (7), (10), (11), (12), and (13), removing section (9), and renumbering as needed.

PURPOSE: This amendment removes documentation requirements from section (9) and moves them into 10 CSR 50-2.080, incorporates requirements from 10 CSR 50-2.055(9) into subparagraph (7)(B)1.B., improves readability, and removes unnecessary restrictive language pursuant to Executive Order 17-03 and the Red Tape Reduction Initiative.

(3) All wells drilled shall be completed with tubing, packer, and a string(s) of casing which *[shall be]* properly cemented at sufficient depths to protect all water, oil, or gas bearing strata and *[shall]* prevent their contents from passing into other strata. For wells drilled to producing strata at a depth of no greater than one thousand five hundred feet (1500'), an operator may set a single casing string with no tubing or packer, if the well is cemented from the bottom of the casing to the surface to seal off and protect any underground source of drinking water. The state geologist may approve other methods of cementing casing in a well.

(4) Cement shall, **except as otherwise modified or approved by the state geologist—**

(A) *[b/Be]* used in setting all casing or sealing off producing strata, underground porosity gas storage strata, or underground sources of drinking water. *Cement shall;*

(B) *[b/Be]* installed from the bottom to the top of the casing in one (1) continuous operation using pressure grouting techniques. *The cement must;*

(C) *[b/Be]* placed in a minimum one inch (1") annulus between strings of casing or the casing and borehole. *The cement shall;*

(D) *[b/Be]* maintained at surface level. *;* and

(E) **Be in place for at least eight (8) hours and reach a compressive strength of three hundred (300) pounds per square inch *[B/before]* the bottom plug is drilled or before tests are initiated, *[the surface casing shall stand cemented]* and **before** further operations *[shall not]* begin *[until the cement has been in place for at least eight (8) hours and has reached a compressive strength of three hundred (300) pounds per square inch. These requirements may be modified by the state geologist].***

(7) *[The]* **Each operator of a permitted injection well shall comply with the following requirements *[shall apply to permitted injection wells].***

(A) *[Each operator shall e/Equip]* the wellhead with a pressure observation valve and maintain equipment necessary to obtain injection pressure measurements upon inspection by an authorized representative(s) of the state geologist. For injection wells completed prior to March 30, 2016, add the pressure observation valve *[shall be added]* prior to testing for mechanical integrity, or upon request of the state geologist;

(B) *[The following t/Tubing and packer requirements *[shall apply to permitted injection wells].**

1. Each well permitted shall meet one (1) of the following requirements:

A. **Equip** *[T/the well *[shall be equipped]* to inject through tubing below a packer;*

B. **Set** *[A/a packer run on the tubing *[shall be set]* in casing opposite a cemented interval at a point immediately above the uppermost perforation or openhole interval. **Fill** *[T/the annulus between the tubing and the casing *[shall be filled]* with a corrosion-inhibiting fluid or hydrocarbon liquid. All wells using wellhead pressure to inject fluids must follow the tubing and packer requirements set in this subparagraph; or**

C. **Construct** *[A/a packerless or tubingless completion for injection wells drilled to no greater than one thousand five hundred feet (1500') *[is authorized under the provisions of]* pursuant to paragraph (7)(B)2. or 3. of this regulation;].*

2. Injection through tubing without a packer is authorized if all of the following requirements are met:

A. **Run** *[T/the tubing *[shall be run]* to a depth not shallower than forty feet (40') above the uppermost perforation or open hole of the injection interval;*

B. **Equip** *[E/each wellhead *[shall be equipped]* with a pressure observation valve on the tubing and the tubing-casing annulus; and*

C. *[The operator of the tubingless completion shall m/Maintain the well so that the mechanical integrity tests can be performed as specified in 10 CSR 50-2.055(12); and].*

3. Injection without tubing is authorized if all of the following requirements are continuously met during the life of the well:

A. The casing *[shall be]* cemented continuously from setting depth to surface;

B. Surface wellhead injection pressure *[shall be]* recorded monthly and kept by the operator for five (5) years;

C. All pressure readings recorded *[shall be]* taken during actual injection operations; and

D. The operator of the tubingless completion *[shall]* maintain the well so that the mechanical integrity tests can be performed as specified in 10 CSR 50-2.055(12).

[(9) Documentation. Legible documentation of the cementing operations across all strata shall be maintained by the operator and provided to the state geologist upon request. The documentation may consist of invoices, job logs, job descriptions, or other similar service company reports.]

*[(10)](9) All points at which a well is in physical contact with a pool shall meet all minimum distance requirements as specified in 10 CSR 50. For horizontal wells, **submit** a directional survey *[must be submitted]* with *[a]* the well completion or recompletion report to verify points at which the well is in contact with the pool.*

[(11)](10) Any well not constructed in compliance with requirements of this regulation shall be shut in, according to 10 CSR 50-2.060 until compliance is achieved.

*[(12)](11) All stratigraphic test wells that are not converted to another type of well must be permanently plugged according to 10 CSR 50-2.060(3) within ninety (90) calendar days of the spud date. A single thirty (30) calendar day extension period may be granted upon written request to the state geologist. If conversion is to take place, **submit** a permit modification *[must be submitted]* to the state geologist as detailed in 10 CSR 50-2.030(9) or 10 CSR 50-2.060(4) prior to conversion. The well will then be subject to all completion and location requirements for the type of well to which it is being converted.*

[(13)](12) Permanent signage must be posted within ninety (90) calendar days of spud date at each well site indicating the well name,

well number, and API number. Stratigraphic test wells and non-commercial gas wells are exempt from signage posting.

AUTHORITY: section 259.070, RSMo [Supp. 2015] 2016. Original rule filed Oct. 11, 1966, effective Oct. 21, 1966. For intervention history, please consult the *Code of State Regulations*. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

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Title 10—DEPARTMENT OF NATURAL RESOURCES Division 50—Oil and Gas Council Chapter 2—Oil and Gas Drilling and Production

PROPOSED AMENDMENT

10 CSR 50-2.055 Injection Wells, Mechanical Integrity Testing, and Well Stimulation Treatment. The council is amending sections (1), (3), (4), (5), (6), (8), (10), (11), (12), (13), (14), and (15), removing section (9), adding a new section (11), and renumbering as needed.

PURPOSE: This amendment clarifies that no fee is assessed for injection permit modifications, removes section (9) and incorporates that information into 10 CSR 50-2.040(7)(B)1.B., clarifies monitoring of pressure as a separate activity from mechanical integrity testing by moving the language to its own section, improves readability, removes repetitive language, and removes unnecessary language pursuant to Executive Order 17-03 and the Red Tape Reduction Initiative.

(1) Prior to commencement of injection operations, the following conditions shall be met:

(A) Application for a permit to inject along with the **applicable** fee [required] pursuant to 10 CSR 50-1.050 has been submitted to the state geologist on forms provided by the department;

(B) The [required] operator license, bond, and approved completion or recompletion report are on file in the office of the state geologist; and

(3) Each application for permit to inject shall be submitted on a form provided by the department, along with the **applicable** fee [required] pursuant to 10 CSR 50-1.050, [shall be] completed in full, and [be] accompanied by—

(A) A map that shows the area of review for the proposed injection well and all area of review wells of public record, within a one-half- (½-) mile radius of the injection well, that penetrate the injection interval/. *Descriptions of all wells that penetrate the injection interval in the area of review shall be included on a form provided by the department.*, with [E]each well [in the area of review shall be] uniquely marked or numbered;

(B) Descriptions of all wells that penetrate the injection interval in the area of review included on the permit application form;

[[B]](C) An electric log run to the surface or a log showing lithology or porosity of geologic strata encountered in the injection well, including an elevation reference. If such a log is unavailable, an electric log to surface or a log showing lithology or porosity of geological strata encountered in wells located within a one- (1-) mile radius of the subject well;

[[C]](D) A description of the fluid to be injected, the source of injected fluid, and compatibility of injected fluid with that of the receiving stratum, including total dissolved solid comparisons;

[[D]](E) An affidavit that notice has been provided in accordance with 10 CSR 50-2.055(4); and

[[E]](F) Information showing that injection into the proposed injection zone will be contained within the injection zone and will not initiate fractures through the overlying or underlying strata that could enable the fluid or formation fluid to enter underground sources of drinking water. This information [may] includes the name, description, [and] depth of overlying and underlying confining strata for the injection zone[.], and computed [F]fracture gradients [shall be computed and provided to the state geologist by the applicant].

(4) Notice. The injection permit applicant shall provide notice utilizing the following procedure:

(A) [The applicant shall n]Notify each of the following parties whose acreage lies partially or fully within a one-half- (½-) mile radius of the project boundaries, by mailing or delivering a copy of the application and notice of intent on or before the date of publication described in subsection (4)(B) to:

1. Each operator or lessee of record;
2. Each owner of record of the mineral rights of unleased acreage; and
3. Each landowner within the project boundaries;

(B) [The applicant shall p]Publish at least one (1) notice of intent to operate an injection well in a newspaper of general circulation in the county in which the proposed injection well(s) is located/. *The notice shall*] and include the following:

1. Name and address of applicant;
2. Location of well(s);
3. Geologic name of proposed injection strata and approximate depth of injection zone;
4. Proposed maximum injection rate and pressure;
5. Description of the need for the injection well(s);
6. Approximate maximum number of injection wells that ultimately will be utilized in the project; and
7. Address of the office of the state geologist, where comments may be sent or additional information may be obtained;

(C) [The applicant shall p]Provide an affidavit of notice to include a copy of the newspaper publication and a list of parties notified according to subsection (4)(A); and

(D) A fifteen (15) calendar day written comment period [shall] begins on the date of publication. A record [shall] will be kept by the state geologist of all written comments received and the responses to these comments. If within this comment period the state geologist determines that a significant degree of public interest is expressed, or other factors indicate the need for a public hearing, the state geologist may order a hearing. Public notice of the hearing will be provided in a newspaper of general circulation in the county where the proposed injection well is located with a hearing date set for no sooner than thirty (30) calendar days after the date of notice. If no public hearing is ordered, the state geologist will process the application after the end of the fifteen (15) calendar day comment period and upon receipt of an affidavit of newspaper publication.

(5) Modifications.

(A) Modifications to the type or construction of the injection well including, but not limited to, an increase in injection rate or pressure

or an additional perforation or injection zone, neither of which is expressly authorized by the existing permit, *[shall]* require an application for a permit to inject to be filed along with the **applicable fee** *[required]* pursuant to 10 CSR 50-1.050, except as specified in subsection (5)(B) below.

(B) *[An operator shall not be required to file an application to modify any injection well permit but shall file with the state geologist a notice of permit modification on a form provided by the department]* **No fee will be assessed for an injection permit modification** when the operator seeks to add or delete additional sources of the fluid disposed into the well but will not exceed the maximum authorized injection rate and pressure.

(C) Each application for any modifications to the injection permit, including increasing pressure or rate and changing or adding injection strata, *[shall]* require the notice specified in section (4) of this regulation.

(6) Upon application for a permit to inject, the state geologist *[shall]* **will** review the application and, within fifteen (15) business days, determine if the application is in proper form and if the requirements of Chapter 259, RSMo, and implementing regulations are met. If the application is incomplete or lacking *[required]* information, forms, or fees, the state geologist *[shall]* **will** notify the operator and suspend the application process. When the *[required]* **missing** form, information, or fee is submitted by the operator and received by the state geologist, the fifteen (15) business day permit period will begin anew. If the state geologist has not received the missing or incomplete *[required]* application information or fee within thirty (30) days after notification of the operator, the application *[shall]* **will** be considered null and void and the operator must reapply by submitting a new application for a permit to inject, along with the *[required]* **associated fee**.

(A) If the state geologist finds that the application is in good form, that all requirements of the application have been met, and that Chapter 259, RSMo, and implementing regulations are being met, the state geologist *[shall]* **will** issue the permit.

(B) If the state geologist determines either that the application is not in proper form, that the operator failed to submit the applicable fees, or that Chapter 259, RSMo, and implementing regulations are not being met, *[the state geologist shall deny]* the permit **will be denied**.

(C) If the state geologist finds that injection at the proposed site would be an undue risk to the surface or subsurface environment, *[the state geologist shall deny]* the permit **will be denied**.

(8) A permit to inject shall not be transferred from one operator to another operator without approval of the state geologist. **To transfer any permit to inject to a new operator (transferee),** *[The current operator (transferor) may submit a request, on a form provided by the department, to the state geologist a request to transfer any permit to inject to a new operator (transferee). The request shall be submitted on a form provided by the department]* no less than thirty (30) calendar days prior to the planned transfer. Any such request may be denied if the state geologist determines that the operator has not submitted all the *[required]* **necessary** information. The transfer of a permit to inject *[shall]* **will** follow the transfer procedures prescribed in 10 CSR 50-2.010(6)(A) through (C).

[(9) For all injection well applications that require wellhead pressure to inject fluids, the operator shall inject the fluids through tubing under a packer set immediately above the uppermost perforation or openhole zone, except as specified in 10 CSR 50-2.040(7).]

[(10)](9) Injection pressures. A maximum injection pressure for injection wells *[shall]* **will** be established by the state geologist so that the pressure in the injection zone during injection does not ini-

tiate new fractures or propagate existing fractures in the confining strata. The injection pressure also should not cause the injected fluid to migrate into an underground source of drinking water.

(A) The injection pressure determinations *[should be]* **shall be approved by the state geologist** based on one (1) of the following methods:

1. For injection of liquids, *[the state geologist shall approve]* injection pressures at 0.75 psig/foot based upon the depth to the midpoint of the perforations **or openhole interval** in the injection zone; or

2. For injection of steam or other gases, *[the state geologist shall approve]* injection pressures at 3.0 psig/foot based upon the depth to the midpoint of the perforations **or openhole interval** in the injection zone; or

3. *[The operator may submit p/Pump pressure data provided by the operator* that details the ability of the injection zone to tolerate the requested pressure; or

4. *[The operator may submit s/Step-rate test data provided by the operator* that details the ability of the injection zone to tolerate the requested pressure; or

5. *[The operator may submit h/Historical injection pressures provided by the operator and/or other data deemed appropriate by the state geologist to demonstrate an appropriate injection pressure for approval by the state geologist].*

(B) At least one (1) test must be performed within one thousand three hundred twenty feet (1320') of the proposed injection well, or as otherwise deemed appropriate by the state geologist. The data *[must]* **and interpretive report should be** submitted in the format *[required]* **requested** by the state geologist.

(C) Following approval by the state geologist of an initial maximum injection pressure, the well used to obtain the data in paragraph *[(10)](9)*(A)3. or 4. above may be used as a reference well. Additional injection wells within one thousand three hundred twenty feet (1320') of the reference well may be approved at the same maximum injection pressure.

(D) The established maximum injection pressure shall not be exceeded. Exceedance of the maximum injection pressure may result in additional compliance monitoring *[as required by the state geologist]*. Modifications to increase a maximum injection pressure for injection wells *[shall]* **will** be made according to section (5) above.

[(11)](10) Following receipt of an approved permit to inject, the operator shall notify the state geologist regarding injection operations as follows:

(A) Immediately upon the commencement of injection operations, *[the applicant shall]* notify the state geologist of the date of commencement; and

(B) After permanent discontinuance of injection operations, *[the operator shall follow the provisions of 10 CSR 50-2.060 and shall]* notify the state geologist, within ninety (90) calendar days, of the date of the discontinuance and the reasons for discontinuance.

(11) Monitoring. Following an initial mechanical integrity test in accordance with subsection (12)(A) below, once a month, the operator shall monitor and record, during actual injection, the pressure or fluid level in the annulus and any other information deemed necessary by the state geologist. An annual report of information logged will be submitted to the state geologist in accordance with 10 CSR 50-2.080.

(12) Mechanical integrity. All new or newly converted injection wells shall *[be required to]* demonstrate mechanical integrity and meet the requirements of 10 CSR 50-2.090 and 10 CSR 50-2.100 before operation may begin. *All injection wells not permanently plugged must demonstrate mechanical integrity]* and at least once every five (5) years. **The date for the mechanical integrity test will be mutually agreed upon by the operator's representative and the state geologist, with a minimum of five (5) business**

days' notice prior to commencing the test.

(A) Demonstration of mechanical integrity shall utilize at least one (1) of the following procedures:

1. Pressure test. **Conduct a pressure test in** [T/the annulus above the packer, or the injection casing in wells not equipped with a packer, *[shall be pressure tested. The date for this test shall be mutually agreed upon by the operator's representative and a representative of the state geologist, with a minimum of five (5) business days' notice prior to the test. Test results shall be verified by the operator's representative. The test shall be conducted]* in the following manner:

A. For newly completed or newly converted wells, the casing may be tested before perforating. **Apply** [A/a fluid pressure of one hundred ten percent (110%) of the approved pressure *[shall be applied]*, but *[shall be]* no less than three hundred (300) psig. A well demonstrates mechanical integrity if, when pressurized, it does not lose more than ten percent (10%) of the tested pressure over a period of thirty (30) minutes;

B. **Pressure test** [W/wells constructed with tubing and a packer *[shall be pressure tested with the packer in place.]* **by applying** [A/a fluid pressure of one hundred ten percent (110%) of the approved pressure *[shall be applied]*, but *[shall be]* no less than three hundred (300) psig. A well demonstrates mechanical integrity if, when pressurized, it does not lose more than ten percent (10%) of the tested pressure over a period of thirty (30) minutes;

C. For wells constructed with tubing and no packer, **set** a retrievable plug or packer *[shall be set]* immediately above the uppermost perforation or openhole *[zone] interval*. **Apply** [A/a fluid pressure of one hundred ten percent (110%) of the approved pressure *[shall be applied]*, but *[shall be]* no less than three hundred (300) psig. A well demonstrates mechanical integrity if, when pressurized, it does not lose more than ten percent (10%) of the tested pressure over a period of thirty (30) minutes; and

D. For wells constructed with tubing and no packer, a method of pressure testing known as fluid depression may be conducted with prior approval and under guidelines established by the state geologist. **Depress** [T/the fluid in the well *[shall be depressed]* with gas pressure to a point in the wellbore immediately above the perforations or openhole interval. The minimum calculated pressure *[required]* necessary to depress the fluid in the wellbore shall be no less than fifty (50) psig. A well demonstrates mechanical integrity if, when pressurized, it does not lose more than ten percent (10%) of the tested pressure over a period of thirty (30) minutes;

2. Alternative tests. **With prior approval by the state geologist**, [A/alternative test methods *[approved by the state geologist]* including, but not limited to, temperature surveys, tracer surveys, or noise logs, may be used to demonstrate mechanical integrity if conditions are appropriate]. *The date for this test shall be mutually agreed upon by the operator's representative and a representative of the state geologist, with notice provided a minimum of five (5) business days prior to the test. Test results shall be verified by the operator's representative and shall be interpreted as specified in state geologist-approved procedures;].*

[(B) **Monitoring.** Following an initial test in accordance with subsection (12)(A) above, once a month, the operator shall monitor and record, during actual injection, the pressure or fluid level in the annulus and any other information deemed necessary by the state geologist. An annual report of information logged shall be submitted to the state geologist in accordance with 10 CSR 50-2.080.

[(C)](B) [The operator shall notify the office of the state geologist at least five (5) business days prior to commencing a mechanical integrity test.] Results of this test **and an interpretive report** must be *[reported]* submitted on the appropriate form to the state geologist within thirty (30) calendar days of completion of the test. The state geologist *[shall]* **will** inform the operator of a satisfactory or unsatisfactory demonstration of mechanical integrity

within fifteen (15) business days.

(13) If a well cannot demonstrate mechanical integrity, or if other conditions develop that threaten or could threaten the quality of surface or groundwater, the operator shall cease operation of the well, *[shall]* notify the state geologist within twenty-four (24) hours with details as to the nature of the problem, and *[shall]* propose a corrective action plan in writing within five (5) business days. The operator shall have no more than sixty (60) calendar days from the date of initial failure in which to perform one (1) of the following:

(14) Following corrective action *[required by]* **performed pursuant to** section (13), the state geologist may require additional testing or monitoring. If the state geologist has approved the use of any chemical sealant or other mechanical device to isolate the leak before use, then the following requirements apply:

(A) Injection pressure into the well *[shall]* **does** not exceed the maximum mechanical integrity test pressure; and

(B) The well *[shall]* demonstrates mechanical integrity on an annual basis for the duration the well is completed in this manner.

(15) The state geologist or an authorized representative *[shall have the authority to]* **may** sample injected fluids at any time during injection operations.

AUTHORITY: sections 259.060, 259.070, 259.080, and 259.140, [RSMo 2000, and sections 259.070 and 259.080,] RSMo [Supp. 2015] 2016. Original rule filed Sept. 15, 2015, effective March 30, 2016. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Kimberly Ward at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to kimberly.ward@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 13, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 6, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 50—Oil and Gas Council
Chapter 2—Oil and Gas Drilling and Production

PROPOSED AMENDMENT

10 CSR 50-2.060 Shut-in Wells, Plugging, and Conversion to Water Well. The council is amending the rule purpose and sections (1), (2), (3), and (4).

PURPOSE: This amendment improves readability by removing unnecessary restrictive language and clarifies plugging methodology to meet industry standards.

*PURPOSE: This rule provides for the protection of both surface water and groundwater. Drilling muds, oil, and water recovered from drilling or testing operations *[must]* **should** be disposed of so that pollution of surface soil, ponds, and streams is avoided. Underground sources of drinking water strata are protected by casing*

set below the deepest strata penetrated that might contain underground sources of drinking water. Dry holes [must] should be plugged in a manner that subsurface salt water or mineralized water will be confined to the stratum in which it occurs. Similarly, each oil or gas stratum penetrated by a well [must] should be permanently sealed when abandoned to prevent contamination of underground sources of drinking water and also to prevent damage by water of any oil or gas stratum capable of producing in paying quantities. In certain logging procedures, a radioactive source (in a probe or sonde) is lowered into the borehole to provide certain subsurface data useful in exploration for oil and gas. Should this radioactive source contained in a logging tool be lost in the hole, certain procedures are prescribed to prevent the accidental or intentional mechanical disintegration of the radioactive source. Further, there are provisions for marking the well site permanently as a warning that a radioactive source has been abandoned in the well.

(1) Shut-in wells.

(A) Shut-in status. A well *[shall be]* is considered shut in whenever it has not been operated for ninety (90) calendar days or more. The shut-in status shall not exceed ninety (90) calendar days. Prior to the expiration of the ninety (90) calendar days shut-in status, the operator of that well shall perform one (1) of the following:

1. Return the well to operation and notify the state geologist on the monthly well status report per 10 CSR 50-2.080(2); or
2. Plug the well; or
3. Petition the state geologist for an extension and propose an end date for the shut-in status.

(B) Approval of shut-in status extensions.

1. *[No well shall have its shut-in status extended as described in subsection (1)(A) unless first approved by the state geologist. Extension to the shut-in status shall not exceed] The state geologist may approve an extension of a well's shut-in status not to exceed one (1) year.* If the operation of any shut-in well is not resumed within one (1) year after the extension has been approved, the well *[shall] will* be deemed *[an] abandoned [well]*, and the operator shall plug the well per these rules. Upon application to the state geologist before the expiration of the one- (1-) year period, and for good cause shown, the period may be extended by the state geologist for one (1) year upon compliance with the provisions of paragraph (1)(B)2. of this section. Additional one- (1-) year extensions may be granted by the state geologist. The total time of such consecutive extensions shall not exceed ten (10) years.

2. Any well in continuous shut-in status must demonstrate mechanical integrity at least once every five (5) years pursuant to procedures in 10 CSR 50-2.055.

(C) Right of denial. Any shut-in well *[shall be subject to inspection] may be inspected* by the state geologist to determine whether its shut-in status could cause contamination of underground sources of drinking water. If necessary, **the state geologist may deny** extensions of shut-in status for a well *[may be denied by the state geologist,] and require* the well *[may be required to]* be plugged, repaired, or demonstrate mechanical integrity *[according to the direction of the state geologist and]* in accordance with these regulations.

(2) Shut-off test. Whenever it appears to the state geologist that any water from any well is migrating or infiltrating into oil-bearing or gas-bearing strata or that any detrimental substances are infiltrating any underground sources of drinking water, the state geologist may require a shut-off test, to be conducted at the expense of the operator of that well. The time and procedure for the taking of the test *[shall] will* be fixed by the state geologist. Reasonable notice of the test *[shall] will* be given to the owner or operator. The owner or operator of any abandoned oil or gas well from which water is migrating or infiltrating into any oil-bearing or gas-bearing strata, or from which any detrimental substances are infiltrating any underground sources of drinking water, shall immediately plug or repair the well in accor-

dance with section (3) below and shall prevent the infiltration of oil, gas, produced water, or other detrimental substances into underground sources of drinking water strata.

(3) Plugging Requirements.

(A) Abandoned Wells.

1. An abandoned well shall be plugged or addressed as directed by the state geologist as provided in these rules. Plugging an abandoned well *[shall]* includes the removal of any rig, derrick, or other operating structure, and all abutments and appurtenances used in the operation of such well, from the land upon which the well was operated, and *[shall]* includes grading the surface of the soil in such manner as to leave the land, as nearly as practicable, in the same condition after the removal of such structures, equipment, and appurtenances as it was before such structures and abutments were placed thereon, unless the owner of the land and the plugging party have entered into an agreement providing otherwise.

2. When the state geologist investigates and determines that a well has been abandoned, as provided in these rules, the state geologist may issue an order directing the operator, owner, or any person who without authorization tampers with or removes surface equipment or downhole equipment from the abandoned well to plug the well as directed by the state geologist. If the person to whom the order is issued fails to comply with any such order that has become final under 10 CSR 50-1.040, the person to whom the order is issued shall be deemed to have abandoned any and all property interests in the well and any rig, derrick, or other operating structure, and all abutments and appurtenances.

3. In addition to any other remedy provided in Chapter 259, RSMo, or implementing regulations, if the state geologist determines that a well has been abandoned, the department or the council may request that the attorney general institute a civil proceeding to request appropriate injunctive relief, civil penalties, or other appropriate remedy, as provided in sections 259.200 and 259.210, RSMo.

4. If the state geologist determines that a well has been abandoned, the department in accordance with section 259.070.5(7), RSMo, may plug such well, or cause it to be plugged as to prevent contamination or danger of contamination of any waters of the state or loss of underground sources of drinking water, and may remediate contamination from the well. Plugging or remediation may include the collection, removal, salvage, and disposition of abandoned operating structures or other equipment. The cost of the plugging or remediation *[shall] will* be paid by the Oil and Gas Remedial Fund, as provided in section 259.190, RSMo.

(B) Notice.

1. Before plugging any well the operator shall file with the state geologist a notice of intent to plug on a form provided by the department. The notice *[shall] will* include the details of the proposed plugging procedure and description of any logging tool containing a radioactive source being abandoned (see subsection (E) of this section for radioactive source abandonment procedure). The proposed plugging procedure shall be approved by the state geologist prior to commencement of plugging activities.

2. The operator shall notify the state geologist no later than five (5) business days before the plugging.

3. Exceptions.

A. If necessary to avoid rig downtime, oral permission to plug dry holes may be obtained by informing the state geologist of proposed plugging procedures, in which case a notice of intent to plug form must be submitted within three (3) business days of plugging.

B. In lieu of prior notice and approval by the state geologist as detailed in paragraph (3)(B)1. of this rule, the operator may elect to plug a well from total depth to the surface with cement slurry, being no less than fifteen (15) pounds per gallon density, **emplaced via a tremie pipe**.

C. If an emergency situation exists, the operator shall orally notify and present the plugging proposal to the state geologist for

approval.

(C) Plugging methods.

1. Before any well is considered plugged, all oil, gas, and water shall be permanently confined in the separate strata originally containing them.

2. *[Wells shall be plugged]* **Plug wells** by emplacing cement **via a tremie pipe** from twenty-five feet (25') below the bottom of the stratum to a point no less than twenty-five feet (25') above the top of the stratum that contains oil or gas, or from which oil or gas has been produced, or that has been used for injection.

3. **Cut off** *[C]* casing in plugged wells, including horizontal wells, *[shall be cut off]* at least three feet (3') below ground surface at the wellhead.

4. Horizontal wells. **Fill** *[E]* each horizontal well *[shall be filled]* with a cement plug from total depth of the deepest producing horizon to the surface.

5. Stratigraphic test wells. **Fill** *[E]* each stratigraphic test well *[shall be filled]* with a cement plug from total depth to within three feet (3') of the surface. All stratigraphic test wells shall be plugged after being used as soon as is reasonably practicable. *However, such wells shall not remain unplugged for a period of more but no later than thirty (30) calendar days after the drilling of the well.*

6. Seismic shot holes. **Plug** *[A]* all seismic shot holes *[shall be plugged]* upon completion of the shooting. Such holes shall not remain unplugged for a period of more than thirty (30) calendar days after the drilling of the hole.

7. If circulation is lost in the drilling of any hole and circulation cannot be regained, **place** a cement plug *[shall be placed]* above the zone of lost circulation to the surface.

8. Alternative plugging methods may be authorized by the state geologist when geologic conditions or conditions in the casing or wellbore warrant.

(D) Reporting. The operator shall submit a plugging record **completed in full on a form provided by the department** along with the **applicable fee** *[required]* pursuant to 10 CSR 50-1.050 to the state geologist within thirty (30) calendar days after completion of plugging activities. *[The report shall be made on the form provided by the department and shall be completed in full.]*

(E) Radioactive source.

1. If a radioactive source *[has been lost and]* cannot be retrieved from a hole, *the person, firm, or corporation proposing the abandonment]* and is **proposed to be abandoned in the well, the operator** shall notify the state geologist. Wells in which radioactive sources are being abandoned shall be mechanically equipped so as to prevent the accidental or intentional mechanical disintegration of the radioactive source.

A. Sources being abandoned in a well shall be covered with no less than a fifty *[feet] foot* (50') standard-red-dyed cement plug *[on top of which]* with a whipstock *[shall be]* set **on top of the plug**. The dye is to alert the re-entry operator prior to encountering the source.

B. In wells where a radioactive logging source has been cemented in place behind a casing string and above total depth, upon abandonment a standard-red-dyed cement plug should be placed opposite the abandoned source and extend fifty feet (50') above and fifty feet (50') below with a whipstock placed on top of the plug.

C. If the operator finds after expending a reasonable effort it is not possible to abandon the source as prescribed in subparagraph (3)(E)1.A. or B. of this rule, the operator shall seek the state geologist's approval to cease efforts in this direction and obtain approval for an alternate abandonment procedure.

2. Upon permanent plugging of any well in which a radioactive source is abandoned, and after removal of the wellhead, a permanent plaque is to be attached to the top of the casing left in the hole in a manner that re-entry cannot be accomplished without disturbing the plaque. This plaque would serve as a visual warning to any person re-entering the hole that a radioactive source has been abandoned in

place in the well. The plaque should contain the trefoil radiation symbol with a radioactive warning and should be constructed of a long-lasting material such as monel, stainless steel, or brass.

(F) Monies deposited in the Oil and Gas Remedial Fund may be used by the department to plug those oil, gas, and injection wells that have been abandoned and have not been plugged according to these rules, subject to the following guidelines:

1. Wells covered by a forfeited bond *[shall]* **will** receive first priority; and

2. Other wells *[shall]* **will** receive secondary priority on the basis of their potential for groundwater contamination or other damage in the order recommended by the state geologist.

(4) Conversion to domestic water supply well. *[A well conversion agreement]* **Within thirty (30) calendar days after conversion of a well to a domestic water supply well, submit an application on a form** *[must be submitted for conversion of a well under these regulations to a domestic water supply well and must be submitted within thirty (30) calendar days after conversion of the well]* **provided by the department.** The well must have been reconstructed, or, for a stratigraphic test well, *[must]* have been constructed, as a water well by a Missouri permitted water well installation contractor and *[must]* meet minimum water well construction standards as set forth in the Water Well Drillers' Act, Chapter 256, RSMo, and the implementing Missouri Well Construction rules 10 CSR 23. A well registration or certification, as appropriate, per those rules shall be approved before the state geologist will approve the conversion agreement and release the applicable bond.

AUTHORITY: sections 259.070 and 259.190, RSMo [Supp. 2015] 2016. Original rule filed Oct. 11, 1966, effective Oct. 21, 1966. For intervening history, please consult the Code of State Regulations. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Kimberly Ward at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to kimberly.ward@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 13, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 6, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

Title 10—DEPARTMENT OF NATURAL RESOURCES

Division 50—Oil and Gas Council

Chapter 2—Oil and Gas Drilling and Production

PROPOSED AMENDMENT

10 CSR 50-2.065 Operations. The council is amending sections (1) and (3) and removing and renumbering section (2).

PURPOSE: This amendment removes the requirement for gas metering, consolidates tank signage requirements by incorporating language from 10 CSR 50-2.010(6)(A)7., improves readability, and removes unnecessary language pursuant to Executive Order 17-03 and the Red Tape Reduction Initiative.

(1) Tank identification. All oil tanks, tank batteries, tanks used for produced water collection or disposal, and tanks used for oil-sediment treatment or storage shall be identified by a sign posted on, or not more than fifty feet (50') from, the tank or tank battery. *[The sign shall be of durable construction and shall be large enough to be legible under normal conditions at a distance of fifty feet (50').]* Within ninety (90) days of any transfer, the transferee shall change the tank battery identification sign to include the new operator information. The sign shall *[identify]*—

(A) **Identify** *[N]*name, license number, and contact information of the operator;

(B) **Identify** *[N]*name of the lease or unit being served by the tank;

(C) **Identify** *[L]*location of the tank, including section, township, range, and county; *[and]*

(D) **Identify** *[C]*contents of the tank*[.]*;

(E) **Be of durable construction; and**

(F) **Be large enough to be legible under normal conditions at a distance of fifty feet (50').**

[(2) Gas to be metered. All gas, when produced or sold, shall be metered with a meter of sufficient capacity. Meters shall not be required for gas produced and used on site for development purposes, production unit operations, primary dwellings, or non-commercial gas wells.

(A) Each party who owns, maintains, or operates the metering device used to record gas sales from each well or production unit in a gas field shall, at a minimum, test and calibrate the metering device on an annual basis and retain the record of the testing and calibration for at least two (2) years. Each party shall also retain, for at least two (2) years, the original field record consisting of meter charts, electronic records, records of gas purchases, or other approved method. All information retained shall be made available to the state geologist upon request.

(B) By-passes shall not be connected around meters in a manner that will permit the improper taking of gas.]

[(3)](2) Spill Notification. Each operator, immediately upon discovery or knowledge of any spill or release, [shall] will take immediate action in accordance with the Spill Bill, section 260.500 to 260.550, RSMo, and the implementing regulations in 10 CSR 24. This does not alter responsible parties' obligations under any other applicable law.

AUTHORITY: *section 259.060[,]* and **259.070**, *[RSMo 2000, and section 259.070,] RSMo [Supp. 2015] 2016. Original rule filed Sept. 15, 2015, effective March 30, 2016. Amended: Filed June 27, 2018.*

PUBLIC COST: *This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.*

PRIVATE COST: *This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.*

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: *Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Kimberly Ward at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to kimberly.ward@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 13, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 6, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.*

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 50—Oil and Gas Council
Chapter 2—Oil and Gas Drilling and Production**

PROPOSED AMENDMENT

10 CSR 50-2.080 Record Retention and Reporting. The council is amending sections (1), (2), and (3).

PURPOSE: *This amendment consolidates all record retention and reporting requirements previously contained in various rules within 10 CSR 50, removes gas metering reporting requirements, removes repetitive language, improves readability, clarifies requirements, and removes unnecessary language pursuant to Executive Order 17-03 and the Red Tape Reduction Initiative.*

(1) Record Retention.

(A) For all wells, each operator shall maintain legible documentation of the cementing operations across all strata and provide this documentation to the state geologist upon request. The documentation may consist of invoices, job logs, job descriptions, or other similar service company reports.

(B) Each operator of an injection well shall keep current, accurate, and legible records of the amount and kind of fluid injected into the injection well and *[shall]* preserve these records for five (5) years.

(C) Each operator of an observation well shall keep current, accurate, and legible records of the data collected and preserve these records for five (5) years.

(2) Monthly Reporting. Each operator shall prepare in full the following monthly reports on a form provided by the department and submit to the state geologist no later than forty-five (45) calendar days after the end of each calendar month:

(A) Well status of each open well in a unit *[shall be reported by each operator monthly on a form provided by the department. The report shall be prepared in full and submitted to the state geologist no later than forty-five (45) calendar days after the end of each calendar month.]*;

(B) Well production *[shall be reported by the first purchaser of the oil or gas monthly on a form provided by the department. The report shall be prepared in full and submitted to the state geologist no later than forty-five (45) calendar days after the end of each calendar month. Production], which* may be presented for each unit unless requested otherwise by the state geologist or the council*[.]*;

(C) Disposal of produced water *[shall be reported by each operator monthly on a form provided by the department. The report shall be prepared in full and submitted to the state geologist no later than forty-five (45) calendar days after the end of each calendar month. The report must include], including* the amount, type, and method of disposal of all fluids produced from oil wells, gas wells, or underground gas storage reservoirs*[.]*; and

[(D) Each party who owns, maintains, or operates the metering device used to record gas produced from each unit or well in any gas field shall file a monthly volume report showing the amount of gas actually metered on each unit, and may be directed by the state geologist to file a volume report showing the amount of gas actually metered for each well for a specified time period. The monthly volume report shall be prepared in full on a form provided by the department and submitted to the state geologist no later than forty-five (45) calendar days after the end of each calendar month.]

[(E)](D) The *[required]* monthly gas well status and production reports may be waived by the state geologist upon application by the operator of the well when production from the well is for the owner's sole and non-commercial use.

(3) Annual reporting. **Each operator shall submit an annual report completed in full on a form provided by the department for the following:**

(A) *[Each operator of an injection well shall submit a]An annual injection well monitoring report [on a form provided by the department. The report] for the previous calendar year [shall be], submitted to the state geologist on or before March 1 of the following year[.];*

(B) *[Each operator shall submit annually on a form provided by the department a]A complete inventory report of all open wells as of December 31[. The report shall be], submitted to the state geologist on or before January 31[.]; and*

(C) *[Each operator shall submit a]An annual [bonding] financial assurance report[, on a form provided by the department,] providing documentation of sufficient [bonding] financial assurance for all open wells, [as required by] pursuant to Chapter 259, RSMo, and implementing regulations[. The report shall be], submitted to the state geologist on or before January 31 of each year and [shall include] including a signed and notarized statement from any applicable surety or issuer of a letter of credit or certificate of deposit documenting that the referenced [bonds] instruments are valid and in full force.*

AUTHORITY: section 259.070, RSMo [Supp. 2015] 2016. Original rule filed Oct. 11, 1966, effective Oct. 21, 1966. For intervening history, please consult the Code of State Regulations. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Kimberly Ward at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to kimberly.ward@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 13, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 6, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

Title 10—DEPARTMENT OF NATURAL RESOURCES

Division 50—Oil and Gas Council

Chapter 2—Oil and Gas Drilling and Production

PROPOSED AMENDMENT

10 CSR 50-2.090 Disposal of Fluids by Injection. The council is removing section (1), amending section (3), and renumbering as needed.

PURPOSE: This amendment removes repetitive requirements, clarifies requirements, and removes unnecessary language pursuant to Executive Order 17-03 and the Red Tape Reduction Initiative.

[(1) Prior to the disposal of fluids by injection, an application for permit to inject must be approved by the state geologist as provided in 10 CSR 50-2.055.]

[(2)](1) Other than within the original production strata, disposal of produced fluid from an oil or gas operation is prohibited into an oil or gas reservoir, a potential oil or gas reservoir, or an underground

source of drinking water unless that drinking water source has been exempted, or unless otherwise approved by the state geologist.

[(3)](2) [Disposal wells] An injection well for the disposal of fluids must be located a minimum of one hundred sixty-five feet (165') from a unit boundary.

AUTHORITY: section 259.070, RSMo [Supp. 2015] 2016. Original rule filed Oct. 11, 1966, effective Oct. 21, 1966. For intervening history, please consult the Code of State Regulations. Amended: Filed June 27, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources' Geological Survey Program attention to Kimberly Ward at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to kimberly.ward@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on September 13, 2018 at 5:00 p.m. A public hearing is scheduled for 10 a.m., September 6, 2018, Mozarkite Conference Room, Missouri Geological Survey, III Fairgrounds Road, Rolla, MO 65401.

Title 10—DEPARTMENT OF NATURAL RESOURCES

Division 80—Solid Waste Management

Chapter 3—[Sanitary Landfill] Solid Waste Disposal Areas-Sanitary, Demolition, and Special Waste Landfills

PROPOSED AMENDMENT

10 CSR 80-3.010 Design and Operation. The department is amending the chapter title, rule purpose, sections (1)–(9), sections (11)–(20), deleting sections (3), (10), and (14), adding new sections (3), (10), (14), (21), and (22), and renumbering as needed.

PURPOSE: The Solid Waste Management Program is proposing to combine 10 CSR 80-3.010 Sanitary Landfill and 10 CSR 80-4.010 Demolition Landfill. The rulemaking for rescinding 10 CSR 80-4.010 will need to run concurrently with the rulemaking amendment to 10 CSR 80-3.010 to ensure there is not a regulatory conflict. The Solid Waste Management Program believes that the consolidation of 10 CSR 80-3.010 and 10 CSR 80-4.010 will not significantly affect the ability to protect human health and the environment.

PURPOSE: This rule pertains to the design and operation of [a] solid waste disposal areas, specifically sanitary [landfill], demolition, and special waste landfills. This rule addresses the siting, groundwater monitoring, gas monitoring, liner, and cover design, seismic design, and the design and operation of leachate collection systems and methane recovery systems. This rule incorporates American Society for Testing and Materials International standards, and the Environmental Protection Agency by reference and sets forth additional state standards.

[Editor's Note: The secretary of state has determined that the publication of this rule in its entirety would be unduly cumbersome or expensive. The entire text of the material referenced has been filed with the secretary of state. This material may be found at the Office of the Secretary of State or at the headquarters of the agency and is available to any

interested person at a cost established by state law.]

PUBLISHER'S NOTE: *The secretary of state has determined that the publication of the entire text of the material which is incorporated by reference as a portion of this rule would be unduly cumbersome or expensive. This material as incorporated by reference in this rule shall be maintained by the agency at its headquarters and shall be made available to the public for inspection and copying at no more than the actual cost of reproduction. This note applies only to the reference material. The entire text of the rule is printed here.*

(1) General Provisions.

(A) This rule is intended to provide for sanitary, **demolition, and special waste** landfill [area] operations that will have minimal impact on the environment. The rule sets forth requirements and the method of satisfactory compliance to ensure that the design, construction, and operation of [sanitary] these landfills will protect the [public] human health[, prevent nuisances] and meet applicable environmental standards. [The requirement subsections contained in this rule delineate minimum levels of performance required of any sanitary landfill operation. The satisfactory compliance subsections are presented as the authorized methods by which the objectives of the requirements can be realized. The satisfactory compliance subsections are based on the practice of sanitary landfilling municipal solid waste. If techniques other than those listed as satisfactory compliance in design or operation are used, it is the obligation of the sanitary] If techniques other than those listed are used, it is the obligation of the landfill owner/operator to demonstrate to the department in advance that the techniques to be employed will satisfy the requirements. Procedures for the techniques shall be submitted to the department in writing and approved by the department in writing prior to being employed. Notwithstanding any other provision of these rules, when it is found necessary [to meet objectives of the requirement subsections], the department may require by permit amendment changes in design and/or operation [as the condition warrants.] to protect human health and the environment. The department may require changes in design, operation, or maintenance of any operating or closed landfill to meet the objectives of the subsections of this chapter.

[(B) Owners/operators of sanitary landfills that close after October 9, 1991 and prior to October 9, 1993, and do not apply the final cover and establish vegetation on the sanitary landfill within one hundred eighty (180) days of last receipt of waste, or an alternative time frame negotiated with the department, are subject to all the requirements of this rule.

(C) Sanitary landfills not in compliance with the requirements of this chapter and of 10 CSR 80-2 are considered to be open dumps, which are prohibited by state law.]

(B) This rule applies to new sanitary, demolition, and special waste landfill construction and operating permits issued on or after the effective date of this rule and those facilities in operation on the effective date of this rule. Prior to January 1, 2020, all operating sanitary, demolition, and special waste landfills shall demonstrate compliance with 10 CSR 80-3.010. Construction and operation of landfills shall be conducted in accordance with the engineering plans and specifications approved by the department. Approved permit documents shall be available on site per section (20). Notwithstanding any other provision of these rules, when it is found necessary, the department may require by permit amendment changes in design and/or operation to protect human health and the environment.

(C) The standards set forth in ASTM, ASTM method D422-63(2007), 2007, ASTM Test D2487-11, and ASTM D6391-11 Standard Test Method, 2011, ASTM D-5084-16, 2016, ASTM D1140-17 and ASTM method D4318-17, 2017, as published by ASTM International, West Conshohocken, PA 19428, are incor-

porated by reference. The standards set forth in the Methods Innovation Rule, 2005, and Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, 2009 as published by the EPA, Washington, D. C. 20004. The standards set forth in the Engineer Manual 1110-2-1906, as published by the Department of the Army Office of the Chief Engineers, Washington, D. C. 20314. This rule does not incorporate any subsequent amendments or additions.

(2) Solid Wastes Accepted and Excluded.

[(A) Requirement. Only the following solid wastes shall be accepted for disposal in a sanitary landfill: municipal waste; bulky waste; demolition and construction wastes; brush and wood wastes; cut, chipped or shredded tires as defined in 10 CSR 80-8; soil; rock; concrete; related inert solids relatively insoluble in water; and incinerator and air pollution control residues generated from facilities exempted under 10 CSR 80-2.020(9)(A)2.

[(B)](A) [Satisfactory Compliance—Design.] Acceptable Wastes. To determine whether a waste may be accepted for disposal, the landfill owner/operator shall consider the landfill design, material, and chemical properties of the landfill liner and environmental control systems, the quantity of the waste, the physical and chemical characteristics of the waste, the equipment and operational procedures to be utilized, the safety of the landfill employees and the general public using the landfill, and the protection of human health and the environment.

1. The landfill's design and operating plans submitted to the department for approval shall specify the following:

A. The [plans shall specify the] types of waste to be accepted for disposal;

B. The handling and disposal procedures for each type of waste; and

C. The procedures to be used to review and approve special waste disposal requests at a sanitary landfill[.], determine when laboratory testing of special waste will be required, determine whether special handling of the waste may be required, and inspect the waste upon arrival at the landfill for disposal.

[(C) Satisfactory Compliance—Operations.

1. Certain bulky solid wastes, such as automobile bodies and furniture shall be crushed on solid ground and then pushed onto the working face near the bottom of the cell. Other bulky items, such as demolition wastes, tree stumps and large timbers shall be pushed onto the working face near the bottom of the cell. Bulky waste shall be excluded from the first layer of waste placed above a composite liner to ensure that the integrity of the liner and leachate collection system has been maintained.

2. Dead animals shall be placed on the working face with other municipal solid wastes and covered immediately with solid waste or soil.

[3.]2. [The d/]Disposal of special wastes which have been approved in [the] a sanitary landfill's construction permit shall be conducted in accordance with the approved design and operating plans [plus] along with any additional procedures determined by the department [as] to be necessary to protect human health and the environment.

[4.]3. For [the disposal of special wastes not specifically approved in the construction permit,] each special waste accepted for disposal:

A. The landfill owner/operator shall require the waste generator to complete a special waste disposal request form [shall be completed] provided by the [generator of the waste and the operator of the sanitary landfill] department;

B. The landfill owner/operator shall require the waste generator to provide all information necessary to describe the source and physical and chemical characteristics of the special waste, including laboratory test results on representative samples, prior

to accepting the material for disposal. The information shall be attached to the request form;

C. The form shall be signed by the waste generator and the owner/operator of the landfill prior to acceptance and disposal of the waste./; and

D. The completed request form and supporting information shall be retained on site in the [sanitary] landfill's operating record/. Neither a permit modification nor prior approval is required unless deemed necessary by the department due to the characteristics of the special waste./ in accordance with section (20).

4. The owner/operator shall inspect each load of special waste upon its arrival at the landfill for disposal.

5. To the extent practical, special waste shall be managed in a manner that minimizes the disruption of normal landfill operations.

6. The owner/operator shall ensure that each special waste is segregated from other waste with which it could be chemically incompatible.

7. If the landfill owner/operator anticipates accepting more than one (1) load of a specific type of special waste from the same source in a relatively short period of time, or the waste will be accepted from the same source on a routine, ongoing basis, only one special waste disposal request form is required. However, if laboratory testing of the waste was initially required, the owner/operator must obtain yearly confirmation through testing or other documentation that the contaminant levels of concern have not increased or new contaminants of concern have not emerged. Should test results change a new special waste disposal request form shall be completed and kept on file.

8. Any special waste that requires handling procedures significantly different from typical municipal solid waste shall be identified in the landfill operating manual and handled accordingly. The department reserves the right to require revisions to the landfill operating manual and landfill operations for special waste that may adversely affect the health and safety of landfill personnel or may be extremely difficult to handle.

9. Waste generated from the clean-up of a former manufactured gas plant (FMGP) site is considered to be a special waste. Prior to accepting FMGP waste for disposal, the landfill owner/operator shall have representative specimens of the waste tested using the SW-846 test method 1311 toxicity characteristic leaching procedure (TCLP), Waste Management System: Testing and Monitoring Activities: Final Rule: Methods Innovation Rule (MIR) 2005. The waste shall not be accepted for disposal unless the concentrations of the following contaminants are below the regulatory levels listed in 40 CFR 261.24(b), Table 1:

A. All metals listed in Table 1, with the exception of barium;

B. Cresol, o-cresol, m-cresol, and p-cresol; and

C. Benzene.

10. Bulky waste and other waste that is accepted at the landfill and has the potential to puncture the membrane liner shall be excluded from the first layer of waste placed above a composite liner.

11. Large quantities of containerized liquids shall be solidified prior to disposal at a sanitary landfill. Bulk containerized or non-containerized liquid waste is banned from being placed in a sanitary landfill unless—

A. The waste is household waste other than septic waste; or

B. The waste is leachate or gas condensate generated within the permitted boundary and is placed in the on-site sanitary landfill designed with a composite liner and leachate collection system as described in this rule, and the facility has departmental approval to recirculate leachate or gas condensate.

[(3) Solid Waste Excluded.

(A) Requirement. The following are excluded from disposal:

1. Regulated quantities of hazardous waste;

2. Radioactive materials as follows:

A. The tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content as defined in the Atomic Energy Act of 1954, 42 U.S.C. section 2014(e)(2)(1996);

B. Any radioactively-contaminated material used in or resulting from the cleanup of radioactively-contaminated sites;

C. Any byproduct, source or special nuclear material regulated by the Atomic Energy Act of 1954;]

[D./12. Radioactive material used in or resulting from medical processes or liquid radioactive material/, unless/ may be accepted if the material has a half-life of less than thirty (30) days;

[E./13. Naturally Occurring Radioactive Material (NORM) [except/ may be accepted with prior written approval from the [Missouri Department of Natural Resources/ department;

[F./14. [Any a/Accelerator-produced radioisotopes/, unless the material has/ with a half-life of less than thirty (30) days may be accepted;

[G./15. Smoke detectors, electron tubes, luminous wristwatches and clocks, luminous lock illuminators, luminous automobile shift quadrants, luminous marine compasses and luminous thermostat dials and pointers in quantities [greater/ less than ten (10) items from any single source may be accepted;

[H. "Low-level radioactive waste" as defined in section 260.700, RSMo as radioactive waste that is not classified as high-level radioactive waste and that is class A, B, or C low-level radioactive waste as defined in 10 CFR 61.55, as that section existed on January 26, 1983. "Low-level radioactive waste" or "waste" does not include any such radioactive waste that is owned or generated by the United States Department of Energy; by the United States Navy as a result of the decommissioning of its vessels, or as a result of any research, development, testing or production of any atomic weapon; and

I. Any greater-than-class-C radioactive waste;

3. Explosives;

4. Regulated quantities of polychlorinated biphenyls (PCBs);

5. Bulk liquids;

6. Highly flammable or volatile substances;

7. Septic tank pumpings;

8. Major appliances;

9. Waste oil;

10. Lead-acid batteries;

11. Waste tires as provided by 10 CSR 80-8.020;

12. Yard waste; and

13. Infectious waste as provided by 10 CSR 80-7.010.]

16. For a demolition landfill, the owner/operator shall prominently display a sign at the entrance of the landfill that lists the wastes that are approved for acceptance, in accordance with this rule and the landfill's approved operations plan.

(B) [Satisfactory Compliance—Design] Excluded Wastes.

1. [In consultation with/ Any wastes not specifically listed in a proposed permit or a modification to an existing permit and approved by the department/, the applicant shall determine what wastes are to be accepted and shall identify them in the plan and the application for a construction permit./ are excluded from disposal. The [criteria used to determine whether the waste can be accepted/ owner/operator shall [include/ describe in the [design/ operating plan of the [landfill, the physical and chemical characteristics of the wastes, the quantity of the wastes, and the proposed operating procedures.

2. *The plans shall specify the operating] sanitary, demolition, or special waste landfills the procedures for screening and [removal of wastes which are excluded from disposal according to subsection (3)(A) of this rule. Operating procedures for the screening and removal of excluded wastes shall include] removing excluded wastes, including but not limited to:*

A. At a minimum, random inspections of incoming waste loads unless the owner/operator takes other steps to ensure that incoming solid wastes do not contain wastes excluded from disposal at *[sanitary] the landfill/s;*

B. Records of any load inspections; and

C. *[Training of facility] Procedures that will be implemented to train appropriate landfill personnel [to recognize unacceptable wastes; and*

D. Immediate notification of the department if a] in the identification and proper handling of radioactive materials, regulated hazardous waste, *[regulated PCB waste, or] infectious waste [is discovered at the facility], asbestos containing material, and other waste prohibited from disposal.*

[(C) Satisfactory Compliance—Operations.]

[1.]2. [A sign with the following wording shall be displayed prominently] The owner/operator shall screen and inspect loads of incoming waste per the approved operations plan and notify the department immediately upon receiving any of the following types of excluded waste at the [site entrance.] landfill:

A. *["Regulated hazardous waste[,];*

B. Radioactive materials[, *polychlorinated biphenyls (PCBs), bulk liquids,];*

C. Regulated quantities of PCB;

D. Explosives;

E. *[/h/Highly flammable or volatile substances[, septic tank pumpings, major appliances, waste oil, lead-acid batteries, waste tires];*

F. Any regulated asbestos containing material (RACM) that has been improperly transported to the site, such as *[provided by 10 CSR 80-8, yard] RACM delivered to the landfill in improper packaging or containers, without proper shipment records, or RACM that has otherwise been transported in violation of the 40 CFR 61, Subpart M, National Emission Standard for Asbestos (NESHAP)(2004); or*

G. Infectious waste[,].

3. For a sanitary landfill, the owner/operator shall prominently display a sign at the site entrance stating the following about excluded wastes: "Regulated hazardous waste, radioactive materials, polychlorinated biphenyls (PCBs), bulk liquids, highly flammable or volatile substances, septic tank pumpings, major appliances, waste oil, lead-acid batteries, whole scrap tires, yard waste, explosives, and regulated infectious waste are excluded from disposal."

[2. The operating procedures for screening of wastes and for removal of wastes which are excluded from disposal according to subsection (3)(A) of this rule shall be implemented.

3. Bulk or non-containerized liquid waste shall not be placed in landfill unless—

A. The waste is household waste or other than septic waste; or

B. The waste is leachate or gas condensate derived from the sanitary landfill, and the sanitary landfill is designed with a composite liner and leachate collection system as described in sections (9) and (10). The owner/operator of sanitary landfill conducting recirculation shall submit a request for departmental approval to recirculate leachate or gas condensate.

4. Containers holding liquid waste may not be placed in a sanitary landfill unless—

A. The container is a small container similar in size to that normally found in household waste; or

B. The waste is household waste.]

[(4)](3) Site Selection.

(A) *[Requirement. Site selection] Prior to submitting an application for a construction permit for a new sanitary, demolition, or special waste landfill or a horizontal expansion of an existing landfill, the owner shall perform an evaluation of the proposed site and surrounding area, and [utilization shall include] a study [and evaluation] of the geologic and hydrologic conditions [and soils at the proposed sanitary landfill and an evaluation of the environmental effect upon the projected use of the completed sanitary landfill. Owners/operators] at that site location. Applications for a landfill construction permit received on or after the effective date of this rule shall document compliance with all applicable siting restriction/s and shall submit this documentation to the department by April 9, 1994, for existing sanitary landfills or prior to receiving a construction permit for] requirements contained in paragraphs (3)(B)1. through 7. of this rule for sanitary landfills [permitted after January 1, 1996. Any existing sanitary landfill that cannot demonstrate compliance with paragraphs (4)(B)1. through (4)(B)6. must close by October 9, 1996] and (3)(B)2. through 7. of this rule for demolition and special waste landfills.*

(B) *[Satisfactory Compliance Design] Location Restrictions.*

1. Airport safety.

A. Owners/operators of sanitary landfills *[operating after October 9, 1993,] that are located within ten thousand feet (10,000') of any airport runway end used by turbojet aircraft or within five thousand feet (5,000') of any airport runway end used by only piston-type aircraft shall demonstrate to the department that the sanitary landfills are designed and operated so that the landfill does not create or pose a bird hazard to aircraft.*

B. Owners/operators proposing to site new sanitary landfills and horizontal expansions of existing sanitary landfills within a five (5)-mile radius of any airport runway end used by turbojet aircraft or piston-type aircraft shall notify the affected airport and the Federal Aviation Administration (FAA).

[2. Owners/operators of sanitary landfills, operating after October 9, 1993, located in one hundred (100)-year floodplains shall demonstrate to the department that the sanitary landfill will not restrict the flow of the one hundred (100)-year flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste so as to pose a hazard to public health or the environment.]

[3.]2. Wetlands.

A. *[Sanitary landfills permitted after October 9, 1993, and unfilled surfaces of existing sanitary l]Landfills shall not be located in wetlands, unless the owner/operator [can] makes the following demonstrations to the department:*

(I) The presumption that a practicable alternative to the proposed landfill is available which does not involve wetlands is clearly rebutted;

(II) The construction and operation of the *[sanitary] landfill will not—*

(a) Cause or contribute to violations of any applicable state water quality standard;

(b) Violate any applicable toxic effluent standard or prohibition under section 307 of the federal Clean Water Act;

(c) Jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of a critical habitat, protected under the Endangered Species Act of 1973; and

(d) Violate any requirement under the Marine Protection, Research, and Sanctuaries Act of 1972 for the protection of a marine sanctuary;

(III) The *[sanitary] landfill will not cause or contribute to significant degradation of wetlands. The owner/operator shall demonstrate the integrity of the [sanitary] landfill and its ability to protect ecological resources by addressing the following factors:*

(a) Erosion, stability, and migration potential of native

wetland soils, muds and deposits used to support the landfill;

(b) Erosion, stability, and migration potential of dredged and fill materials used to support the landfill;

(c) The volume and chemical nature of the waste disposed of in the landfill;

(d) Impacts on fish, wildlife, and other aquatic resources and their habitat from potential release of solid waste from the landfill;

(e) The potential effects of contamination of the wetland and the resulting impacts on the environment; and

(f) Any additional factors, as necessary, to demonstrate that ecological resources in the wetland are sufficiently protected;

(IV) Steps have been taken to attempt to achieve no net loss of wetlands (as defined by acreage and function) by first avoiding impacts to wetlands to the maximum extent practicable as required by subparagraph [(4)(B)3.A.)] (3)(B)2.A. of this rule, then minimizing unavoidable impacts to the maximum extent practicable, and finally offsetting remaining unavoidable wetland impacts through all appropriate and practicable compensatory mitigation actions (for example, restoration of existing degraded wetlands or creation of man-made wetlands); and

(V) The requirements of paragraph [(4)(B)3.] (3)(B)2. may be satisfied by the owner/operator obtaining a United States Army Corps of Engineers permit for construction in a wetland or by demonstrating that the wetland is not regulated by the United States Army Corps of Engineers, or other appropriate agency.

[4. Sanitary landfills permitted after October 9, 1993, and unfilled surfaces of existing sanitary landfills]

3. Floodplains. Owners/operators of landfills located within the one hundred (100)-year floodplains shall demonstrate to the department that the landfill will not restrict the flow of the one hundred (100)-year flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste so as to pose a hazard to human health or the environment.

4. Fault Areas. Landfills located in the seismic impact zone shall not be located within two hundred feet (200') of a fault that has had displacement in Holocene time unless that owner/operator demonstrates to the department that an alternative setback distance of less than two hundred feet (200') will prevent damage to the structural integrity of the landfill and will be protective of *[public]* human health and the environment.

5. [Sanitary landfills permitted after October 9, 1993, and unfilled surfaces of existing sanitary landfills] **Seismic Impact Zones. Landfills** shall not be located in seismic impact zones, unless the owner/operator demonstrates to the department that all containment structures, including liners, final covers, leachate collection systems and surface water control systems, are designed to resist permanent cumulative earthquake displacements not to be greater than six inches (6"), resulting from the maximum credible Holocene time earthquake event's acceleration versus time history.

6. [Owners/operators of sanitary landfills, operating after October 9, 1993,] **Unstable Areas. Landfills** located in an unstable area shall demonstrate to the department that the *[sanitary]* landfill's design ensures that the integrity of the structural components of the *[sanitary]* landfill will not be disrupted. The owner/operator shall consider the following factors, at a minimum, when determining whether an area is unstable:

A. On-site or local rock or soil conditions that may result in failure or significant differential settling;

B. On-site or local geologic or geomorphologic features; and

C. On-site or local human-made features or events (both surface and subsurface).

[7. Plans shall include:

A. A map showing initial and proposed topographies at contour intervals of five feet (5') or less. This map shall have a scale of not less than one inch (1") equal to one hundred feet (100'). If the entire site cannot be illustrated on one (1) plan sheet, an additional map with appropriate hori-

zontal and vertical scales that allows the site to be shown on one (1) standard plan sheet is required;

B. A map showing the land use and zoning within one-fourth (1/4) mile of the sanitary landfill including location of all residences, buildings, wells, water courses, springs, lakes, rock outcroppings, caves, sinkholes and soil or rock borings. All electric, gas, water, sewer and other utility easements or lines that are located on, under or over the sanitary landfill shall be shown on the map. This map shall have a scale of not less than one inch (1") equals four hundred feet (400');

C. A description of the projected use of the closed sanitary landfill. In addition to maintenance programs and provisions, where necessary for monitoring and controlling decomposition gases and leachate, the plans shall address the following ultimate use criteria:

(I) Structures. It is not recommended practice to construct major structures within the permitted area of a closed sanitary landfill. If major structures are to be built within the permitted area of a closed sanitary landfill, prior written approval from the department is required. A professional engineer shall approve their design and construction, including provision for protection against potential hazards of solid waste decomposition gases; and

(II) Other uses. Appropriate design, construction and operating provisions for the sanitary landfill shall be specified to complement the projected future use; and

D. An evaluation of the characteristics and quantity of available on-site soil with respect to its suitability for sanitary landfilling operations. The engineering properties and quantity estimates of the on-site soil shall be discussed and shall include:

(I) Texture. Sieve and hydrometer analyses shall be performed to determine grain size distribution of representative soil samples. Texture may be determined by using the procedures described in ASTM method D422-63 or the procedures described in Appendix D of Engineer Manual 1110-2-1906, prepared by the United States Army Corps of Engineers;

(II) Plasticity. The liquid limit, plastic limit and plasticity index of representative soil samples shall be determined. Plasticity may be determined by using the procedures described in ASTM method D4318 84 or the procedures described in Appendix III of Engineer Manual 1110-2-1906, prepared by the United States Army Corps of Engineers;

(III) Hydraulic conductivity. Laboratory hydraulic conductivity tests shall be performed upon undisturbed representative soil samples using a flexible wall permeameter (ASTM D-5084). If an aquifer is found to be laterally continuous across the anticipated limit of the proposed landfill, the hydraulic conductivity of each significant continuous geologic unit must be determined. Examples of accepted field tests are in situ slug or pump tests which isolate the geologic unit of interest; and

(IV) Area extent and depth. The area extent and depth of soil suitable for landfill construction shall be determined. Variations in soil depth shall be clearly described.

8. If the base of the landfill liner will be in contact with groundwater, the applicant shall demonstrate to the department's satisfaction that the groundwater will not adversely impact the liner.

(C) Satisfactory Compliance—Operations.

1. The sanitary landfill shall be accessible to vehicles which the sanitary landfill is designed to serve by all-weather roads leading from the public road system; temporary roads shall be provided as needed to deliver wastes to the working face.

2. The sanitary landfill shall not be located in an area

where the public roads or access roads to the sanitary landfill may be flooded preventing use of the sanitary landfill unless an alternate sanitary landfill is available.

(5) Design.

(A) Requirement.]

7. Placement Above the Uppermost Aquifer. Landfills permitted after the effective date of this rule, including horizontal expansions, must be constructed with a base (lowest elevation of the sump) that is located above the upper limit of the uppermost aquifer, or must demonstrate that there will not be an intermittent, recurring, or sustained hydraulic connection between any portion of the base of the landfill and the uppermost aquifer due to normal fluctuations in groundwater elevations (including the seasonal high water table).

(4) Design and Operations per the Permit Application. Plans, addendums, as-built drawings, or other documents which describe the design, construction, operation, or closure of a sanitary, demolition, or special waste landfill, or which request an operating permit modification for the [sanitary] landfill shall [be prepared or approved by a professional engineer. These documents shall be stamped or sealed by the professional engineer and submitted to the department for review and approval.] be prepared, sealed, and signed by a professional engineer and submitted to the department for review and approval. Procedures for testing, site evaluation and preparation, and construction of the landfill shall be included with the application and performed as described in the plans approved by the department. Plans, addendums, as-built drawings, or other documents which describe the design, construction, operation, or closure of a landfill, or which request an operating permit modification for the landfill shall be kept available for use and reference on-site.

(A) Plans accompanying the permit application for a sanitary, demolition, or special waste landfill that are submitted to the department shall include:

1. A map showing initial and proposed topographies at contour intervals of five feet (5') or less utilizing a scale of not less than one inch (1") equal to one hundred feet (100'). If the entire site cannot be illustrated on one (1) plan sheet, an additional map with appropriate horizontal and vertical scales that allows the site to be shown on one (1) standard plan sheet is required;

2. A map having a scale of not less than one inch (1") equals four hundred feet (400') identifying the land use and zoning within one-fourth (1/4) mile of the landfill including location of all known residences, buildings, wells, water courses, springs, lakes, rock outcroppings, caves, sinkholes and soil or rock borings. All known electric, gas, water, sewer and other utility easements or lines that are located on, under or over the landfill shall be shown on the map;

3. A description of the projected use of the closed landfill. In addition to maintenance programs and provisions, where necessary for monitoring and controlling decomposition gases and leachate, address the following ultimate use criteria:

A. Structures. Enclosed structures are not allowed on the waste footprint of a landfill. If major structures are to be built outside of waste within the permitted area of any landfill, the structure must be approved by the department. A professional engineer shall approve the design and construction of the structure, including provisions for protection against potential hazards of solid waste decomposition gases; and

B. Other uses. Appropriate design, construction and operating provisions for the landfill shall be specified;

4. An evaluation of the characteristics and quantity of available soil on or off site with respect to its suitability for landfill construction and operation. The engineering properties and quantity estimates of the soil on site shall be discussed and include:

A. Texture. Sieve and hydrometer analyses shall be performed to determine grain size distribution of representative soil samples. Texture may be determined by using the procedures described in ASTM method D422-63(2007) ASTM International 100 Barr Harbor, West Conshohocken, PA 19428, Publication date 2007 or the procedures described in Appendix D of *Engineer Manual 1110-2-1906*, prepared by the United States Army Corps of Engineers;

B. Plasticity. The liquid limit, plastic limit and plasticity index of representative soil samples shall be determined. Plasticity may be determined by using the procedures described in ASTM method D4318-17 ASTM International, 100 Barr Harbor, West Conshohocken, PA 19428 Publication date 2017 or the procedures described in Appendix III of *Engineer Manual 1110-2-1906*, prepared by the United States Army Corps of Engineers;

C. Hydraulic conductivity. Perform laboratory hydraulic conductivity tests upon undisturbed representative soil samples using a flexible wall permeameter (ASTM D-5084-16) ASTM International, 100 Barr Harbor, West Conshohocken, PA 19428 Publication date 2016. If an aquifer is found to be laterally continuous across the anticipated limit of the proposed landfill, the hydraulic conductivity of each significant continuous geologic unit must be determined. Examples of accepted field tests are *in situ* slug or pump tests which isolate the geologic unit of interest; and

D. Areal extent and depth. Determine the areal extent and depth of soil suitable for landfill construction, clearly describing any variations in soil depth.

[(B) Satisfactory Compliance—Design]

[1.]5. [Plans submitted as part of an application for a construction permit after the effective date of this rule shall provide for the maintenance of a] Provisions for a minimum one hundred foot (100')-buffer zone between the outer edge of the landfill liner and any property line(s) or any right-of-way(s) of adjoining road(s) when the property line(s) is inside the right-of-way(s) to provide room for assessment and/or [remedial] corrective actions[.];

[2.]6. [The plan shall include] An operating manual describing the various tasks [that shall be] performed during a typical shift/

3. Owners/operators], including routine and regular tasks (i.e., monitoring and inspections) performed throughout the life of [sanitary landfills shall demonstrate] the landfill;

7. A demonstration of how adverse geologic and hydrologic conditions may be altered or compensated for via surface water drainage diversion, underdrains, sumps, and other structural components[. All], and detail all necessary site alterations [of the site shall be detailed] in the plans[.];

[A.]8. Site-specific [P]precipitation, evapotranspiration and climatological conditions [shall be considered in site selection and design.]; and

[B.]9. [Engineering plans and specifications that have] All computer models [attached to them shall] used in the landfill design, and list the limitations and assumptions of each model [used in the application].

[4.] (B) [Plans shall include] Stability analyses shall be performed for all stages of landfill construction[.], all liner and leachate system components, and on all final cover system components, as well as an evaluation of the effect of waste settlement on the final cover system components, side slope liner system components, and surface water management system components. Results shall be submitted from all analyses and evaluations.

[A. Settlement and bearing capacity analysis shall be performed on the in-place foundation material beneath the disposal area. The effect of foundation material settlement on the liner and leachate collection system shall be evaluated.

B. Stability analysis shall be performed on all liner and leachate system components.]

(C) Settlement and bearing capacity analysis shall be performed on the in-place foundation material beneath the disposal area, and the results submitted in the design plan.

(D) Analyze the effect of foundation material settlement on the liner and leachate collection system, and include the analytical results in the plan.

[C.](E) Analyze [L/leachate collection pipe material and drainage media [shall be analyzed] to demonstrate that these components possess structural strength to support maximum loads imposed by overlying waste materials and equipment, and include the results in the plan.

(F) Sump and side slope riser designs must consist of at least SDR 17 piping and be not less than eighteen inches (18") in diameter.

(G) Submit typical phase development drawings with the plan.

(H) Submit proposed cross-section drawings with the application that show groundwater elevations in relation to liner and final landfill height.

(I) **Liner System Requirement.** All landfills applying for a construction permit after the effective date of this rule shall have a composite liner as follows:

1. A composite liner must consist of two (2) components; the upper component consisting of, at a minimum, a thirty (30) mil geomembrane liner (GM), and the lower component consisting of at least a two foot (2') layer of compacted soil with a hydraulic conductivity of no more than 1×10^{-7} centimeters per second (cm/sec). GM components consisting of high density polyethylene (HDPE) must be at least sixty (60) mil thick. The GM or upper liner component must be installed in direct and uniform contact with the compacted soil or lower liner component. The compacted soil liner component at a minimum shall be—

A. Constructed of six to eight inch (6–8") loose lifts of unfrozen soil;

B. Compacted to ranges of density and moisture such that are shown to provide for the liner to have a hydraulic conductivity no more than 1×10^{-7} cm/sec.;

C. Protected from the adverse effects of desiccation or freeze/thaw cycles after construction, but prior to placement of waste;

D. Composed of soils that meet following minimum specifications:

(I) Be classified under the Unified Soil Classification Systems as CL, CH, or SC (ASTM Test D2487-11) ASTM International, 100 Barr Harbor, West Conshohocken, PA 19428 Publication date 2011;

(II) Allow more than thirty percent (30%) passing a number 200 sieve;

(III) Have a liquid limit equal to or greater than twenty (20) (ASTM Test D4318-17) ASTM International, 100 Barr Harbor West Conshohocken, PA 19428, Publication date 2017; and

(IV) Have a plasticity index equal to or greater than ten (10) (ASTM Test D4318-17) ASTM International, 100 Barr Harbor, West Conshohocken, PA 19428, Publication date 2017; and

E. Installed so that the minimum bottom slope in any direction of flow is at least one percent (1%).

2. A test pad shall be constructed at the site and tested to verify that the proposed soils, construction equipment, and construction and quality control (QC) procedures are adequate to ensure that the soil component of the composite liner system will meet the requirements listed above.

A. Quality assurance (QA)/QC procedures and construction methods to be used during test pad construction shall be described in detail in the approved engineering report, and shall be identical to those proposed for liner construction with the fol-

lowing additions:

[D.](I) [Waste mass stability analysis] At least two (2) laboratory hydraulic conductivity tests shall be performed on [the disposal area at final waste grade conditions and at intermediate slope conditions.] undisturbed samples of the completed test pad;

[E. Stability analysis shall be performed on all final cover system components, including an evaluation of the effect of waste settlement on the final cover system components, side-slope liner system components, surface water management system components and gas migration system components.

(C) Satisfactory Compliance—Operations.

1. Construction and operation of the sanitary landfill shall be conducted in accordance with the engineering plans and specifications approved by the department.

2. The operating manual describing the various tasks that shall be performed during a typical shift shall be available to employees for reference and to the department upon request.

3. Phase development drawings shall be included with the application.]

(II) At least five (5), with one (1) in-situ, hydraulic conductivity tests (ASTM D6391-11 Standard Test Method for Field Measurement of Hydraulic Conductivity Using Borehole Infiltration, ASTM International, 100 Barr Harbor West Conshohocken, PA 19428, Publication date 2011), shall be performed on the completed test pad; and

(III) At least two (2) test pits shall be excavated into the completed test pad to observe inter-lift bonding.

B. If test pad construction and testing shows that the proposed methods are not sufficient to meet the requirements of this rule, a new test pad shall be constructed using revised procedures approved by the department.

C. For phased construction, only one (1) test pad will be required for a particular soil source, soil type, and equipment type.

D. A final report shall be submitted to the department that describes in detail the construction and QC procedures which were used to achieve satisfactory test pad performance.

(I) The report must be approved by the department prior to beginning construction of the soil component of the composite liner system in the disposal area.

(II) The report shall serve as guidance for construction of the soil component of the composite liner system.

E. The requirement for a test pad may be waived provided the applicant can demonstrate to the department's satisfaction the construction and QC procedures are identical to those described in the approved engineering report and will result in construction of a liner which meets the requirements of this rule, and the soils proposed for liner construction meet the following minimum specifications:

(I) Have a plasticity index greater than fifteen (15) and less than thirty (30) (ASTM test D4318-17 ASTM International, 100 Barr Harbor, West Conshohocken, PA 19428, Publication date 2017);

(II) Allow more than fifty percent (50%) passage through a number 200 sieve (ASTM D1140-17 ASTM International, 100 Barr Harbor, West Conshohocken, PA 19428, Publication date 2017); and

(III) Allow less than ten percent (10%) by weight particle sizes greater than two millimeters (2 mm).

(J) Requests for using Alternative Composite Liners will be considered for approval on a site-by-site basis.

(K) The leachate collection and removal system at the landfill shall be designed, constructed, operated, and maintained to collect and remove leachate from the landfill as long as leachate is being generated.

1. The leachate collection and removal system shall be:

A. Designed and operated to maintain less than a thirty (30) centimeter (1 foot) depth of leachate over the liner system;

B. Constructed of materials that are chemically resistant to the waste managed in the landfill and the leachate expected to be generated, and of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying waste, waste cover materials, and equipment used at the landfill; and

C. Designed and operated to minimize clogging during the active life and post-closure care period.

2. Leachate flow quantities shall be estimated and the method(s) of leachate management outlined in the application submittal.

3. Leachate storage facilities shall comply with all currently applicable requirements of the Missouri Clean Water Law and corresponding rules.

4. Minimum design criteria for leachate collection systems shall include the following:

A. Ponds and/or tanks of sufficient capacity to store, equalize flow to disposal systems, and allow system/operating flexibility;

B. Collection systems designed and operated so that any leachate formed will flow by gravity into collection areas from which the leachate can be removed, treated if necessary, and disposed;

C. That proposed leachate management by application on the working face or by recirculation within the permitted fill area shall be conducted in accordance with an approved engineering method and designed, constructed, and operated to minimize off-site impacts; and

D. Any leachate collection system open to precipitation must be designed to prevent discharge during twenty-four (24) hour, twenty-five (25) year storm event. Plans shall include the calculations detailing the design. At a minimum, sites using leachate pond(s) shall maintain an operational freeboard of no less than two feet (2') during normal operation, with a minimum freeboard of no less than one foot (1') after a twenty-four (24) hour, twenty-five (25) year storm event.

5. Design plans shall include a description of leachate management activities by the landfill owner/operator under normal operating conditions. The plans shall also describe actions the landfill owner/operator shall take when the emergency level of less than two feet (2') of freeboard occurs in any pond, including at a minimum, how leachate will be removed from the pond and transported to a treatment or disposal facility, if necessary, a description of any testing requirements necessary prior to disposal, and a schedule by which time the leachate levels will be returned to the normal operating range, with at least two feet (2') of freeboard; the plans shall also include a contingency plan for leachate management in the event the on-site system becomes inoperable and leachate must be taken off-site for proper disposal.

[(6)](5) Quality Assurance/Quality Control [(qa/qc)] (QA/QC).

(A) [Requirement.] The construction, operation, corrective action, and closure of the sanitary, demolition, or special waste landfill shall include [quality assurance and quality control] QA/QC measures to ensure compliance with approved plans and all applicable federal, state, and local requirements. The permittee shall be responsible for ensuring that the [quality assurance/quality control] QA/QC supervision is conducted by a qualified professional.

[(B) Satisfactory Compliance—Design.]

[1.](B) QA/QC [P]plans shall include/:

A. A/a detailed description of the [qa/qc] QA/QC testing procedures that will be used for every major phase of construction. [The] This description must include, at a minimum, the frequency of inspections, field testing, laboratory testing, equipment to be uti-

lized, the limits for test failure, [and] a description of the procedures to be used upon test failure/;], and

[B. A/a detailed procedure for the reporting and recording of [qa/qc] QA/QC activities and testing results/; and].

[C. Continuous visual classification of borrow soil during landfill construction by qualified qa/qc inspector(s) or certifying professional engineer.

2. All qa/qc reports shall be reviewed and approved by a professional engineer.]

1. The QA/QC plan shall include the following components:

A. Leachate collection system. Reports prepared or approved by the professional engineer transmitting the results of the QA/QC procedures and stating that the leachate collection system was constructed according to the approved design or describing any deviations from the approved design; and

B. Liner. The liner specified by section (4) of this rule shall be constructed in accordance with the approved design specifications. The QA/QC procedures shall include:

(I) Evidence that the liner material(s) utilized meet the minimum design specifications;

(II) Evidence that field construction techniques meet the minimum design specifications (for example, soil density test);

(III) Evidence that the liner construction is proceeding as designed through routine verification observations using a pre-determined system of horizontal and vertical survey controls; and

(IV) Oversight of the liner construction and QA/QC procedures by a qualified professional, including submission of reports to transmit the results of the QA/QC procedures. Additionally, the report shall state that the liner was constructed according to design and describe any deviations from the approved design.

[(C) Satisfactory Compliance—Operations.]

[1.](C) At a minimum, [qa/qc] QA/QC testing shall include:

[A.]/1. Testing of each lift of the soil component of the final cover and landfill liner for field density and field moisture once per every ten thousand (10,000) square feet and providing relatively uniform coverage over the landfill surface;

[B.]/2. Laboratory testing for Atterberg Limits (ASTM D-4318) and hydraulic conductivity [testing] of the soil used for liner construction once for every five thousand (5,000) cubic yards [of liner constructed] excavated;

[C.]/3. [Continuous] Routine visual classification of borrow soil during landfill construction [by qualified qa/qc inspector(s) or certifying] with oversight by an approving professional engineer;

[D.]/4. Measuring the elevations of the final cover and the landfill liner on a maximum spacing of one hundred-foot (100') centers and at one hundred-foot (100') intervals along each line where a break in slope occurs/;];

[(I)]/A. Landfill liner. Measuring the elevations of the top and bottom of both the landfill liner/ and leachate collection systems;

[(II)]/B. Final cover. Measuring the elevations of the top and bottom of the landfill cover—

[(a)]/I The compacted clay layer [supporting the geomembrane liner]; and

[(b)]/II The soil layer supporting vegetative growth;

5. For a geomembrane:

[E.]/A. Nondestructive testing of all seams of the geomembrane in the landfill liner and [final cover] cap; and

[F.]/B. Random destructive testing of the seams with results consistent with Geosynthetic Institute (GM 19a or GM 19b) 2017 of the geomembrane liner in the landfill liner and [final cover] cap on an average frequency of at least one (1) every five hundred (500) linear feet of seams/; and].

[G. Verification of the thickness of the leachate collection media by qualified qa/qc inspector(s) or certifying professional engineer on one hundred-foot (100') centers.]

[2.](D) All testing shall be performed *[under the direction of qualified qa/qc inspectors]* with oversight by an approving professional engineer for every major phase of construction.

[3. The qa/qc plan shall provide the following components:

A. Leachate collection system. Reports prepared or approved by the professional engineer transmitting the results of the qa/qc procedures and stating that the leachate collection system was constructed according to the approved design or describing any deviations from the approved design; and

B. Liner. The liner specified by section (10) of this rule shall be constructed in accordance with the approved design specifications. The qa/qc procedures shall include:

(I) Evidence that the liner material(s) utilized meet the minimum design specifications;

(II) Evidence that field construction techniques are resulting in the minimum design specifications (for example, soil density tests);

(III) Evidence that the liner construction is proceeding as designed through regular verification using a predetermined system of horizontal and vertical survey controls; and

(IV) Oversight of the liner construction and qa/qc procedures by a professional engineer. This shall include reports prepared, or approved, by the professional engineer transmitting the results of the qa/qc procedures and stating that the liner was constructed according to design or describing any deviations from the design.]

(E) All QA/QC reports shall be reviewed, approved, and submitted by a professional engineer.

[(7)](6) Survey Control.

[(A) Requirement.] Benchmarks, horizontal controls, and boundary markers at the landfill shall be established by a land surveyor registered in the state of Missouri to check and mark the location and elevations of the *[sanitary landfill]*. Construction stakes marking an individual section(s) or phase(s) shall be established as necessary to ensure the construction and operation proceed in accordance] landfill ensuring compliance with design plans, phasing plans, and applicable conditions within the approved *[plans]* construction permit.

[(B) Satisfactory Compliance—Design.]

[1.](A) *[Boundary survey.]* At a minimum, *[A]*a survey of the entire permitted acreage shall be conducted in accordance with the current Minimum Standards for Property Boundary Surveys *[10 CSR 30-2.010]* 2 CSR 90 and include the establishment of a permanent monument used as a benchmark.

[2. Vertical control. The land surveyor shall establish a permanent monument as a benchmark or confirm the prior establishment of a benchmark on or adjacent to the property. The elevation shall be on the North American Vertical Datum, 1929 or similar well documented datum. If no such established datum exists within one (1) mile of the property, a project datum may be assigned to the benchmark. The benchmark shall be clearly shown on the survey plat.

3. Horizontal control. The land surveyor shall establish three (3) permanent monuments as horizontal control stations. These stations shall form a triangle whose sides shall not be less than one thousand feet (1000'). The location of the horizontal control will be shown on the survey plat.

4. The land surveyor shall establish boundary markers designating the entire permitted acreage which shall be composed of material which will last throughout the life of the sanitary landfill.

5. Construction stakes. Stakes marking the individual section(s) or phase(s) specifically designated for the placement of solid waste are to be placed in locations and composed of material that is consistent with the operating life of

the section or phase.

(C) Satisfactory Compliance—Operations.

1. All boundary markers, benchmarks, horizontal control stations and construction stakes shall be clearly marked and identified.

2. Missing or displaced benchmarks or horizontal control stations shall be replaced or reestablished by or under the supervision of a land surveyor. The registered surveyor shall prepare a plat showing the replacement or reestablishment and furnish a copy to the department.

3. Missing or displaced construction stakes shall be replaced or reestablished as necessary to ensure the operations proceed in accordance with approved plans.

4. The permanent monuments designating vertical and horizontal control stations and boundary markers designating the entire permitted acreage shall be placed prior to receiving an operating permit as required by 10 CSR 80-2.020(2)(B).

5. Construction stakes marking the active area shall be placed prior to deposition of waste in individual areas, sections or phases of the sanitary landfill as designated by the approved engineering plans.]

(B) All site survey information shall be reported in State Plane Coordinate System and North America Vertical Datum 1988.

[(8)](7) Water Quality.

(A) *[Requirement.]* The location, design, construction and operation of the sanitary landfill shall minimize environmental hazards and shall conform to applicable ground and surface water quality standards and requirements. Applicable standards are federal, state or local standards and requirements that are legally enforceable.] All permits and approvals necessary to comply with requirements of the Missouri Clean Water Law and corresponding rules shall be obtained from the department prior to commencement of operations at any landfill.

[(B) Satisfactory Compliance—Design.]

1. Plans shall include:

A. A report on the detailed geologic and hydrologic investigation of the site as required by 10 CSR 80-2.015.

B. Current and projected use of water resources in the potential zone of influence of the sanitary landfill;

C. Groundwater elevation and proposed separation between the lowest point of the lowest cell and the predicted maximum water table elevation;

D. Potential interrelationship of the sanitary landfill, local aquifers and surface waters based on historical records or other sources of information;

E. Proposed location and design of observation wells, sampling stations and testing program planned; and

F. Provisions for surface water runoff control to minimize infiltration and erosion of cover. All applicable permits and approvals necessary to comply with requirements of the Missouri Clean Water Law and corresponding rules shall be obtained from the department.]

[(I)](B) The *[area]* owner/operator of *[the watershed which will be affected by the sanitary]* an existing or new landfill *[shall be specified.]* or any horizontal expansion shall design, construct, operate, and maintain:

[(III)]1. On-site drainage, collection and control structures and channels *[shall be designed to prevent flow onto the active portion]* for all stages of *[the sanitary landfill during peak discharge]* development to accommodate, at a minimum, the storm water volume from *[at least]* a twenty-four (24)-hour, twenty-five (25)-year storm. The engineering calculations and assumptions shall be included and explained in the engineering report~~./~~ submitted to the department with the permit application; and

[(III)]2. *[On-site drainage structures and channels shall be designed to collect]* Surface water runoff diversion and control

[at least the water volume resulting from a twenty-four (24)-hour, twenty-five (25)-year storm.

[(IV) On-site drainage and channels shall be designed to empty expeditiously after storms to maintain the design capacity of the system.

(V) Contingency plans for on-site management of surface water which comes in contact with solid waste shall be specified.

(C) Satisfactory Compliance—Operations.

1. Surface water courses and runoff shall be diverted from the sanitary landfill (especially from the working face) by devices such as structures to minimize infiltration, erosion, ponding, run-on at the working face and off-site transport of water and sediment (i.e. through ditches, berms, [and proper] grading). The sanitary landfill shall be constructed and graded so as to promote rapid surface water runoff without excessive erosion. Regrading shall be done as required during construction and after completion to avoid ponding of precipitation and to maintain cover integrity., etc.);

[2.](C) The quantity of water coming in contact with solid waste shall be minimized by the daily operational practices.

1. Water which comes in temporary contact with [solid] the waste shall be managed [as leachate] in accordance with the approved stormwater management plans.

2. Water that passes through or emerges from waste and contains soluble, suspended, or miscible materials removed from such waste shall be managed in accordance with the approved leachate management plan.

[(9)](8) Leachate [Collection System] Management.

[(A) Requirement. A leachate collection system shall be designed, constructed, maintained and operated to collect and remove leachate from the sanitary landfill.

(B) Satisfactory Compliance—Design. The potential for leachate generation shall be evaluated in determining the design of the system. Leachate flow quantities shall be estimated and the method(s) of leachate treatment and disposal shall be outlined. Leachate storage and treatment facilities shall comply with all currently applicable requirements of the Missouri Clean Water Law and corresponding rules. Construction quality assurance/quality control (qa/qc) procedures shall be included. Where a leachate treatment system is designed to have a discharge to the waters of the state, any required discharge permit(s) shall be obtained from the department in accordance with requirements of the Missouri Clean Water Law and corresponding rules.

1. Minimum design criteria for leachate collection systems shall include the following:

A. Ponds and/or tanks of sufficient capacity to store, equalize flow to disposal systems, and allow system/operating flexibility;

B. Construction material chemically resistant to the waste managed in the sanitary landfill and the leachate expected to be generated;

C. Construction materials of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying solid wastes, cover, leachate, and by any equipment used at the sanitary landfill;

D. Design and operate systems to function without clogging through the scheduled operating life, closure and post-closure of the sanitary landfill;

E. Design and operate systems to maintain less than one foot (1') depth of leachate over the disposal area liner; and

F. Design and operate systems so that any leachate formed will flow by gravity into collection areas from which the leachate can be removed, treated, and disposed.

2. Leachate management by recirculation within the per-

mitted fill area shall be conducted in accordance with an approved engineering method.

3. Any leachate collection system open to the atmosphere must be designed to prevent discharge during a twenty-five (25)-year, twenty-four (24)-hour storm event. Plans shall include the calculations detailing the design.

4. The applicant shall provide a method of leachate management in the application. A secondary or "backup" method of leachate disposal will be required unless the applicant can demonstrate that a secondary method will not be necessary.

(C) Satisfactory Compliance—Operations.

1. The leachate collection systems specified by subsection (9)(B) shall be properly installed and operated in accordance with the permit and the approved design and plans and maintained for the thirty (30)-year post-closure care period, or as long as the department determines necessary.]

(A) Leachate collection media designated for use in the system must be of a material and placed in a manner that will not damage the liner (i.e. no sharp rocks and wires from tire chips).

(B) Leachate dispersion on the working face for purposes of waste compaction and densification is allowed in accordance with operational plans approved by the department.

[2.](C) Leachate generated by the [sanitary] landfill shall be controlled on[-] site, collected in a manner to protect the integrity of any containment system, and not be allowed to [discharge]:

1. Enter the storm water infrastructure, including ponds, where it will mix with storm water;

2. Overtop its containment basin;

3. Discharge off of the [sanitary] landfill property [or];

4. [d/]Discharge into the waters of the state, except as allowed in [accordance with] the approved plans and through a permit under the Missouri Clean Water Law and corresponding rules[.]; and

5. Blow or drift off the lined areas of the facility from spray dispersal, or mist evaporative methods employed for leachate management.

[(10) Liner System.

(A) Requirement. A liner shall be placed on all surfaces to minimize the migration of leachate from the sanitary landfill.

(B) Satisfactory Compliance—Design. A composite liner shall be installed at all landfills permitted after October 9, 1993, and existing landfills with uncovered surfaces, as determined by the department on a site-by-site basis, that consists of two (2) components—

1. An upper component that shall consist of a minimum thirty (30) mil thick geomembrane. Geomembrane components consisting of high density polyethylene (HDPE) shall be at least sixty (60) mil thick;

2. A lower component that shall consist of a least a two foot (2')-layer of compacted soil with a hydraulic conductivity of no more than 1×10^{-7} cm/sec. A compacted soil liner at a minimum shall be constructed of six to eight-inch (6–8") lifts, compacted to ninety-five percent (95%) of standard Proctor density with the moisture content between optimum moisture content and four percent (4%) above the optimum moisture content, or within other ranges of density and moisture that are shown to provide for the liner to have a hydraulic conductivity no more than 1×10^{-7} cm/sec. The design shall include a detailed explanation of the construction techniques and equipment necessary to achieve ninety-five percent (95%) of the standard Proctor density under field conditions. The design also shall include qa/qc procedures to be followed during construction of the liner. The composite liner shall be protected from the adverse effects of desiccation or freeze/thaw cycles after construction, but prior to placement of waste. Traffic shall be routed so as to

minimize the detrimental impact on the constructed liner prior to placement of waste. The soils used for this purpose shall meet the following minimum specifications:

A. Be classified under the Unified Soil Classification Systems as CL, CH, or SC (ASTM Test D2487-85);

B. Allow more than thirty percent (30%) passage through a No. 200 sieve (ASTM Test D1140);

C. Have a liquid limit equal to or greater than twenty (20) (ASTM Test D4318-84);

D. Have a plasticity index equal to or greater than ten (10) (ASTM Test D4318-84); and

E. Have a coefficient of permeability equal to or less than 1×10^{-7} cm/sec when compacted to ninety-five percent (95%) of standard Proctor density with the moisture content between optimum moisture content and four percent (4%) above the optimum moisture content, when tested by using (ASTM D-5084) a flexible wall permeameter or other procedures approved by the department;

3. The geomembrane component shall be installed in direct and uniform contact with the compacted soil component so as to minimize the migration of leachate through the geomembrane should a break occur; and

4. All solid waste disposal areas shall have a minimum bottom slope in any direction of flow of at least one percent (1%).

(C) Satisfactory Compliance—Operations.

1. A test pad shall be constructed at the site and tested to verify that the proposed construction and quality control (qc) procedures are adequate to ensure that the soil component of the composite liner system will meet the requirements of (10)(B)2. of this rule.

A. Construction and qc procedures to be used during test pad construction shall be described in detail in the approved engineering report, and shall be identical to those proposed for liner construction with the following additions:

(I) At least two laboratory hydraulic conductivity tests shall be performed on undisturbed samples of the completed test pad;

(II) At least one (1) in situ hydraulic conductivity test shall be performed on the completed test pad; and

(III) At least two (2) test pits shall be excavated into the completed test pad to observe interlift bonding.

B. If test pad construction and testing shows that the proposed methods are not sufficient to meet the requirements of paragraph (10)(B)2. of this rule, a new test pad shall be constructed using revised procedures approved by the department.

2. For phased construction, only one test pad will be required.

3. A final report shall be submitted to the department which describes in detail the construction and qc procedures which were used to achieve satisfactory test pad performance.

A. The report must be approved by the department prior to beginning construction of any portion of the composite liner system in the disposal area.

B. The report shall serve as guidance for construction of the soil component of the composite liner system.

4. The requirement for a test pad may be waived provided—

A. The applicant can demonstrate to the department's satisfaction that construction and qc procedures identical to those described in the approved engineering report have resulted in construction of a liner which meets the requirements of paragraph (10)(B)2. of this rule; and

B. The soils proposed for liner construction meet the following minimum specifications:

(I) Have a plasticity index greater than fifteen (15)

and less than thirty (30) (ASTM test D4318-84);

(II) Allow more than fifty percent (50%) passage through a number 200 sieve (ASTM D1140); and

(III) Have less than ten percent (10%) by weight particle sizes greater than two (2) mm.

5. The liner specified by subsection (10)(B) of this rule shall be constructed in accordance with the approved design specifications.]

[(11)](9) Groundwater Monitoring.

(A) [Requirements.] The owner/operator of a sanitary, **demolition, or special waste** landfill shall implement a groundwater monitoring program capable of determining the [sanitary] landfill's impact on the quality of groundwater underlying the [sanitary] landfill.

[(B) Satisfactory Compliance—Design.]

1. [All sanitary]Landfills permitted on or after [October 9, 1993, shall] the effective date of this rule must be in compliance with all of the groundwater monitoring requirements of this section before an operating permit is issued. [Existing sanitary landfills shall be in compliance with section (11)—]

[A. By October 9, 1994, if located less than one (1) mile from a drinking water intake (surface or subsurface);

B. By October 9, 1995, if located between one (1) mile and two (2) miles from a drinking water intake (surface or subsurface); or

C. By October 9, 1996, if located greater than two (2) miles from a drinking water intake (surface or subsurface).]

2. The department may require landfills permitted prior to the effective date of this rule to comply with part or all of this section, if it is determined necessary by the department to protect human health or the environment.

[2.]3. The owner/operator of a [sanitary] landfill shall establish the potential for migration of fluid generated by the [sanitary] landfill into the groundwater by an evaluation of—

A. A water balance of precipitation, evapotranspiration, runoff, and infiltration;

B. At a minimum, the following characteristics:

(I) Geologic materials;

(II) Description of soil and bedrock to a depth adequate to allow evaluation of water quality protection provided by the soil and bedrock;

(III) Groundwater elevation;

(IV) Proposed separation between the lowest point of the lowest cell and the maximum water table elevation;

(V) Proximity of the [sanitary] landfill to water supply wells or surface water;

(VI) Rate and direction of groundwater flow; and

(VII) Current and projected use of water resources in the potential zone of influence of the [sanitary] landfill.

[3. A groundwater monitoring system shall be capable of yielding groundwater samples for analysis and shall consist of—

A. Monitoring wells (at least one (1) installed hydraulically upgradient; that is, in the direction of increasing static head from the sanitary landfill. The numbers, locations and depths shall be sufficient to yield groundwater samples that are—

(I) Representative of background water quality in the groundwater near the sanitary landfill; and

(II) Not affected by the sanitary landfill; and

B. Monitoring wells (at least three (3)) installed hydraulically downgradient; that is, in the direction of decreasing hydraulic head from the sanitary landfill. The number, locations and depths shall ensure that they detect any significant amounts of fluids generated by the sanitary landfill that migrate from the sanitary landfill to the groundwater. Monitoring wells, or clusters of monitoring wells, shall

be capable at a minimum, of monitoring all saturated zones down to and including the uppermost aquifer.

4. All monitoring wells shall be constructed as per 10 CSR 23-4.

(C) Satisfactory Compliance—Operations.

1. Groundwater monitoring wells.

A. Groundwater monitoring wells shall be installed so that the number, spacing and depths of monitoring systems shall be determined based upon site-specific technical information that shall include thorough characterization of—

(I) Aquifer thickness, groundwater flow rate, groundwater flow direction including seasonal and temporal fluctuations in groundwater flow; and

(II) Saturated and unsaturated geologic units and fill materials overlying the uppermost aquifer, materials comprising the uppermost aquifer, and materials comprising the confining unit defining the lower boundary of the uppermost aquifer; including, but not limited to, thicknesses, stratigraphy, lithology, hydraulic conductivities and porosities.]

4. Groundwater monitoring wells shall be installed so that the number, spacing, and depths of the wells shall be determined based upon site-specific technical information that shall include a thorough characterization of—

A. Aquifer thickness, groundwater flow rate, groundwater flow direction including seasonal and temporal fluctuations in groundwater flow; and

B. Saturated and unsaturated geologic units and fill materials overlying the uppermost aquifer, materials comprising the uppermost aquifer, and materials comprising the confining unit defining the lower boundary of the uppermost aquifer, including, but not limited to, thicknesses, stratigraphy, lithology, hydraulic conductivities, and porosities. If the lower confining unit is one hundred feet (100') or more below the top of the uppermost aquifer, borings verifying the lower confining layer will not be required. The upper fifty feet (50') of uppermost aquifer will be characterized.

5. Groundwater monitoring wells shall be capable of yielding groundwater samples for analysis, effectively monitoring the site, and consisting of at least one (1) well installed hydraulically up gradient; that is, in the direction of increasing static head from the landfill and at least three (3) wells installed hydraulically downgradient; that is, in the direction of decreasing hydraulic head from the landfill. The numbers, locations, and depths shall be sufficient to yield groundwater samples that are—

A. Representative of background water quality in the groundwater near the landfill;

B. Not affected by the landfill; and

C. Capable of detecting any significant amounts of fluids generated by the landfill that migrate from the landfill to the groundwater.

D. Monitoring wells, or clusters of monitoring wells, shall be capable at a minimum, of monitoring all saturated zones down to and including the uppermost aquifer. The maximum distance a monitoring well may be located from the waste boundary is one hundred fifty meters (150m) or four hundred ninety-two feet (492').

[B.]6. The design and installation of groundwater monitoring well systems shall be observed, supervised, and certified by a qualified groundwater scientist and approved by the department.

[C. All groundwater monitoring wells shall be operational prior to the acceptance of wastes, unless other arrangements are approved by the department.

D. The design, installation, development, and decommissioning of monitoring wells and piezometers must be performed in accordance with 10 CSR 23-4.]

[2.](B) Sampling and [r]Reporting.

[A.]1. Each landfill's groundwater monitoring program must include consistent sampling and analysis procedures that are

designed to ensure monitoring results [that] provide an accurate representation of groundwater quality at [the background and down-gradient] monitoring wells installed in compliance with [subsection (11)(B).] this section. The owner/operator [must] shall submit the sampling and analysis program to the department for approval. The program [must] shall include procedures and techniques for—

[(I)]A. Monitoring well maintenance;

[(II)]B. Monitoring well redevelopment;

[(III)]C. Monitoring well depth measurement and hydraulic levels;

[(IV)]D. Monitoring well purging and sampling utilizing dedicated equipment;

[(V)]E. Equipment calibration;

[(VI)]F. Decontamination and field blanks;

[(VII)]G. Sample and duplicate sample collection;

[(VIII)]H. Sample preservation;

[(IX)]I. Sample labeling;

[(X)]J. Sample handling;

[(XI)]K. Field measurements;

[(XII)]L. Field documentation;

[(XIII)]M. Chain of custody control;

[(XIV)]N. Sample shipment;

[(XV)]O. Analytical procedures;

[(XVI)]P. Q[a/qc]/A/QC control—field and laboratory; and

[(XVII)]Q. Statistical testing strategy [per paragraph (11)(C)5.] for each parameter's concentrations.

[B.]2. Each groundwater monitoring program shall include sampling and analytical methods that are appropriate for groundwater sampling and that accurately measures [hazardous constituents and other] monitoring [parameters] constituents in groundwater samples. Analysis shall be performed on unfiltered samples.

[C. The sampling procedures and frequency shall be protective of human health and the environment.

D. Groundwater elevations shall be measured in each well immediately prior to purging, each time groundwater is sampled.]

3. The owner/operator shall determine the rate and direction of groundwater flow each time groundwater is sampled. Groundwater elevations in wells which monitor the same solid waste disposal area shall be measured within a period of time short enough to avoid temporal variations in groundwater flow which could preclude accurate determination of groundwater flow direction.

[3.](C) Baseline/background [m]Monitoring.

[A.]1. The owner/operator of a new sanitary or demolition landfill shall establish background groundwater quality for each of the monitoring [parameters or] constituents required [under paragraphs (11)(C)4.] in Appendix I for sanitary landfills and Appendix III for demolition landfills.

2. To establish background, a minimum of [four (4)] eight (8) quarterly samples of statistically independent sample data shall be obtained and analyzed from all monitoring wells [during a minimum of one (1) year following well installation]. Additional background samples may be required based upon the statistical methodology used.

[B. The number of samples collected to establish background values for groundwater quality data shall satisfy the requirements of subsection (11)(C) and shall be consistent with the appropriate statistical procedures determined pursuant to paragraph (11)(C)5. The sampling procedures shall be those specified under paragraph (11)(C)4. for detection monitoring, paragraph (11)(C)6. for assessment monitoring and section (12) for corrective action.]

3. Landfills may begin accepting waste upon completion of a minimum of four (4) independent baseline/background sampling events of constituents in Appendix I for sanitary landfills and Appendix III for demolition landfills.

4. Background concentrations also shall be established for monitoring constituents listed in Appendix II for sanitary landfills and Appendix IV for demolition landfills, and two (2) sets of

samples shall be obtained prior to accepting waste. If constituents in Appendix II for sanitary landfills and Appendix IV for demolition landfills are not detected after two (2) background events, the background concentrations may be established as the detection limit for those organic constituents.

[4.](D) Detection [m]/Monitoring.

[A.]/1. The owner/operator of a sanitary or demolition landfill shall obtain and analyze water samples from the groundwater monitoring wells during the months of March through May and September through November of each calendar year unless an alternative schedule is approved by the department. Sampling events must be six (6) months apart or an alternative schedule approved by the department.

[B.]/2. The following [parameters] constituents shall be analyzed each time a sample is obtained:

[Chemical Oxygen Demand (COD in milligrams per liter (mg/l));

Chlorides (Cl, (mg/l));

Iron (Fe, (mg/l));

pH (units);

Specific Conductance (Conductivity at twenty-five degrees Celsius (25°C) in micromhos per centimeter (µmho/cm));

Total Dissolved Solids (TDS, (mg/l)); and

All parameters]

A. For a sanitary landfill, all constituents listed in Appendix [1] I of this rule.

B. For a demolition landfill, all constituents listed in Appendix III of this rule.

C. *[Additionally, t/*The water level in each well shall be measured at the sanitary or demolition landfill at the time the sample is taken.

[C.]/3. The sample results, and any results of statistical analysis determining statistically significant increases for any [parameter per paragraph (11)(C)5.] constituent shall be submitted to the department in one (1) report within ninety (90) days of when samples are collected. All groundwater data shall be submitted electronically, in the format and method as prescribed by the department.

[D.]/4. In the case of all detection monitoring requirements previously listed, the department may specify an appropriate alternative frequency for repeated sampling and analysis during the active life of the [sanitary] landfill (including closure) and the post-closure period. The department may add additional [parameters] constituents or delete [parameters] constituents on a site-by-site basis through an evaluation of waste and leachate characteristics of the [sanitary] landfill.

[E. The electronic submission of groundwater data is required. This submission shall be in the format and method as prescribed by the department.]

[5.](E) Statistical Method. The owner/operator of a sanitary, demolition, or special waste landfill shall specify [in the operating record one (1) or more of the following] statistical methods to be used in evaluating groundwater monitoring data for each monitoring constituent. *[The statistical test chosen shall be conducted separately for each constituent:]* These methods shall be in compliance with the EPA Unified Guidance, Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities-March 2009.

[A. A parametric analysis of variance (ANOVA) followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The procedure shall include estimation and testing of the contrasts between each downgradient well's mean and the upgradient means for each parameter;

B. An ANOVA based on ranks followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The procedure shall include estimation and testing of the contrasts between each downgra-

dient well's median and the background medians for each parameter;

C. A confidence interval procedure in which an interval for each parameter in each downgradient well is constructed around the mean/median of the particular well's data or data residuals and compared to the mean/median of pooled background well data;

D. A prediction interval procedure in which an upper prediction limit for an interval for each parameter in each well is compared to subsequently obtained values from the same well;

E. A prediction interval procedure in which an upper prediction limit for an interval for each parameter constructed on the pooled background well data or data residuals is compared to subsequently obtained values from each downgradient well;

F. A tolerance interval procedure in which an upper tolerance limit for an interval for each parameter's pooled background well data is compared to each downgradient well's concentration values;

G. A multicomparison procedure utilizing any recommended U.S. Environmental Protection Agency combinations of intra-well and inter-well procedures for each parameter;

H. A control chart approach, meeting the performance standards of part (11)(C)5.J.(III), that gives control limits for each parameter;

I. A different statistical test method that meets the performance standards of subparagraph (11)(C)5.J. of this rule. The owner/operator must submit the statistical test method to the department for approval before the use of the alternative test;

J. Any statistical method chosen under subparagraph (11)(C)5.J. of this rule shall comply with the following performance standards, as appropriate:

(I) The statistical method used to evaluate groundwater monitoring data shall be appropriate for the distribution of the concentration data for the chemical parameters or hazardous constituents. If the distribution of the concentration data for the chemical parameters or hazardous constituents is shown by the owner/operator to be inappropriate for a normal data distribution theory test, then the data should be transformed or a distribution-free (nonparametric) theory test should be used. If the concentration data distributions for the constituents of each well differ, more than one (1) statistical method will be needed;

(II) If an individual well comparison procedure is used to compare an individual compliance well constituent concentration with background constituent concentration or a groundwater protection standard, the test shall be done at a Type I error level no less than 0.01 for each testing period. If a multiple comparisons procedure is used, the Type I experiment-wide error rate for each testing period shall be no less than 0.05, however, the Type I error of no less than 0.01 for individual well comparisons shall be maintained. This performance standard does not apply to tolerance intervals, prediction intervals or control charts;

(III) If a control chart approach is used to evaluate groundwater monitoring data, the specific type of control chart and its associated parameter values shall be protective of human health and the environment. The selection of this method shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern;

(IV) If a confidence interval, tolerance interval or a prediction interval is used to evaluate groundwater monitoring data, then the level of confidence for each interval, and

the percentage of the population that each interval contains, shall be protective of human health and the environment. Selection of one (1) or more of these] methods shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern;

(V) The statistical method shall account for data below the limit of detection with one (1) or more statistical procedures that are protective of human health and the environment. Any practical quantization limit that is used in the statistical method shall be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility; and

(VI) If necessary, the statistical method shall include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.]

[6.](F) Response to **Detection Monitoring** [s/Statistical a/Analysis.

[A.].1. If the **statistical** comparison [for the upgradient wells] shows a statistically significant increase (or pH change) over background, **and attributes it to the landfill**, the owner/operator of the **sanitary, demolition, or special waste landfill** shall submit this information to the department **and conduct confirmation sampling during the next semiannual monitoring event.**

[B. If the comparisons for downgradient wells show a statistically significant increase (or pH change) over background, the owner/operator shall immediately obtain two (2) additional groundwater samples from each downgradient well where a statistically significant difference was detected. One shall be analyzed by the owner; the other shall be analyzed by the department to determine whether the statistically significant difference was a result of laboratory error.]

[C.].2. If the [additional samples show] **results of the statistical analysis reveal** a statistically significant increase (or pH change) over background, the owner/operator must demonstrate to the department within ninety (90) days that a source other than the [sanitary] landfill caused the contamination or that the statistically significant increase resulted from an error in sampling, analysis, statistical evaluation, or natural variation. **If the statistical methodology used by the owner/operator requires a confirmation sample or second confirmation sample, then the next required sampling event can be used as the confirmation sampling event.**

(G) Assessment Monitoring.

1. If the owner/operator cannot make this demonstration to the department, the owner/operator shall submit a [plan to the department for a] groundwater assessment monitoring [program] plan and implement the [program as described in subparagraphs (11)(C)6.D. through J. of this rule] **plan upon approval by the department.** The **assessment monitoring** plan shall specify the following:

[(I)]A. The number, location, and depth of wells;

[(III)]B. Sampling and analytical methods for the monitoring [parameters] **constituents** listed in Appendix II or IV of this rule, **as applicable;**

[(III)]C. Evaluation procedures, including any use of previously gathered groundwater quality information;

[(IV)]D. The rate and extent of migration of a contaminant plume in the groundwater; and

[(V)]E. The concentrations of the contaminant plume in the groundwater.

[D. Within ninety (90) days of beginning an assessment monitoring program, and semiannually after that, the owner/operator shall sample and analyze the groundwater for all constituents identified in Appendix II of this rule. A minimum of one (1) sample from each downgradient well shall be collected and analyzed during the initial sampling event. A minimum of one (1) sample from each downgradient

well at which Appendix II constituents were detected shall be collected and analyzed at each subsequent sampling event. For any new constituent detected during assessment monitoring (that was not detected during detection monitoring) in the downgradient wells, a minimum of four (4) statistically independent samples from each well (upgradient and downgradient) shall be collected and analyzed to establish background for the new constituents. The department may add additional parameters or delete parameters on a site-by-site basis through an evaluation of waste and leachate characteristics of the sanitary landfill.

E. The owner/operator shall establish a groundwater protection standard for each constituent specified in Appendix II of this rule and detected in the groundwater. The groundwater protection standard shall be—

(I) For constituents for which a maximum contaminant level (MCL) has been promulgated under section 1412 of the Federal Safe Drinking Water Act and found at 40 CFR part 141, the MCL for that constituent;

(II) For constituents for which MCLs have not been promulgated, the background concentration for the constituent established from wells in accordance with paragraph (11)(C)3. of this rule;

(III) For constituents for which the background level is higher than the MCL identified in part (11)(C)6.E.(I) of this rule, the background concentration; or

(IV) A level established by the department based upon a consideration of relevant factors, including: multiple contaminants in the groundwater, exposure threats to sensitive environmental receptors, and other site-specific exposure or potential exposure to groundwater.]

[F.].2. After obtaining the results from the initial or subsequent sampling events [required in subparagraph (11)(C)6.D.], the owner/operator shall—

[(I)]A. Within fourteen (14) days, [notify] **advise** the department [and place a notice in the operating record identifying the] **which** constituents [that] have been detected;

[(III)]B. Within ninety (90) days, and on [at least] a semi-annual basis after that, resample all wells and conduct analysis for all constituents listed in Appendix I [to this rule and for those constituents listed in] and Appendix II [of this rule that are detected in response to the requirements of subparagraph (11)(C)6.D. of this rule. Record the concentrations of each constituent in the facility operating record and notify the department of the constituent concentrations. A minimum of one (1) sample from each well sampled(background and downgradient)] that were detected during the initial or subsequent sampling events of assessment monitoring for the sanitary landfill, and Appendix III and IV that were detected during the initial or subsequent sampling events of assessment monitoring for the demolition landfill. Samples shall be analyzed for the complete list of Appendix II or Appendix IV constituents at least once every five (5) years for all wells in assessment monitoring. A minimum of one (1) sample from each well sampled shall be collected and analyzed during these sampling events;

[(III)]C. Establish background concentrations for any new constituents detected during subsequent monitoring events; and

[(IV)]D. Establish groundwater protection standards for all new constituents detected during subsequent monitoring events. **For the purposes of this subparagraph, the site-specific groundwater protection standards shall be the maximum contaminant level (MCL) established under 10 CSR 25-18.010, provided that if no MCL has been established or the site-specific background value is higher than the MCL, then the groundwater protection standards shall be the site-specific background value.**

[G.].E. If the concentrations of all constituents listed in Appendix II or IV of this rule are shown to be at or below background levels as established in [paragraph (11)(C)3. of] this rule

for two (2) consecutive sampling periods, the owner/operator may reinstate detection monitoring *[at the sanitary landfill as specified under subparagraph (11)(C)3.C. of this rule]*.

[H./F. If the concentrations of any constituents listed in Appendix II or IV of this rule are above background values, but all concentrations are below the groundwater protection standard established under *[subparagraph (11)(C)6.E. of this rule]* using the statistical procedures *[in paragraph (11)(C)5. of this rule]* approved by the department for the landfill, the owner/operator shall notify the department~~/,~~ and the department may require the owner/operator to—

(I) Continue assessment monitoring; or

(II) Develop a corrective *[measures assessment] action plan*, or both.

[I./G. If one (1) or more constituents listed in Appendix I, II, III, or IV of this rule are detected at levels above the groundwater protection standard *[as established under subparagraph (11)(C)6.E.]*, the owner/operator shall—

(I) Provide the department with a report assessing potential corrective *[measures] actions* as *[required under subsection (11)(A)] outlined in section (10)*;

(II) Characterize the nature and extent of the release by installing additional monitoring wells as necessary~~;~~ *install at least one (1) additional monitoring well at the facility boundary in the direction of contaminant migration and sample this well in accordance with paragraph (11)(C)6. of this rule]* to determine the rate and extent of groundwater contamination, and notify all persons who own the land or reside on the land that directly overlies any part of the plume of contamination if contaminants have migrated off-site as indicated by sampling of wells; and

(III) Continue assessment monitoring as per the groundwater quality assessment plan and *[as per]* implement the *[implementation of the] approved* corrective action program specified in *[section (12) of]* this rule.

[J./H. The results of implementation of the assessment monitoring program shall be submitted to the department at the end of each year or an alternate time period approved by the department.

[(12)](10) Corrective Action/Risk Based Corrective Action. Owners and operators of a sanitary, demolition, or special waste landfill that shows one (1) or more constituents listed in Appendix I, II, III, or IV of this rule being detected at levels above the groundwater protection standard as established, shall either proceed with corrective actions or submit a risk based corrective action plan as outlined in subsections (10)(A) through (C).

(A) Assessment of Corrective *[Measures] Action(s)*.

1. Within ninety (90) days of finding that any of the constituents listed in Appendix II or IV of this rule have been detected at a statistically significant level exceeding the groundwater protection standards *[defined under subparagraph (11)(C)6.E. of this rule]*, the owner/operator shall initiate an investigation and assessment of potential corrective *[measures] actions*. This assessment shall be completed within a reasonable period of time, and a report describing the assessment of corrective *[measures] actions* shall be submitted to the department.

2. The owner/operator shall continue to monitor in accordance with the assessment monitoring program as specified in *[subparagraph (11)(C)6.F. of]* this rule.

3. The assessment shall include an analysis of the effectiveness of potential corrective *[measures] actions* in meeting all of the requirements and objectives of the remedy as described *[under subsection (12)(B) of]* in this rule, addressing at least the following:

A. The performance, reliability, ease of implementation, and potential impacts of appropriate potential *[remedies] corrective action(s)*, including safety impacts, cross-media impacts, and control of exposure to any residual contamination;

B. The time required to begin and complete the *[remedy] action(s)*;

C. The costs of *[remedy]* implementation; and

D. The institutional requirements such as state or local permit requirements or other environmental or *[public] human* health requirements that may substantially affect implementation of the *[remedy(ies)] corrective action(s)*.

4. The owner/operator shall discuss the results of the corrective *[measures] action(s)* assessment, prior to the selection of a remedy, in a public meeting with interested and affected parties.

(B) Selection of *[Remedy] Corrective Action(s)*.

1. Based on the results of the potential corrective *[measures] action(s)* assessment *[conducted under subsection (12)(A) of this rule]*, the owner/operator shall propose a *[remedy that, at a minimum, meets the standards listed in paragraph (12)(B)2. of this rule] corrective action(s) plan*. The owner/operator shall submit to the department, within fourteen (14) days of selecting a proposed *[remedy] corrective action(s) plan*, a report describing the proposed *[remedy] corrective action(s)* and *[shall place a copy of the report in the operating record that describes]* how the proposed *[remedy] plan* meets the standards *[in paragraph (12)(B)2.] of this rule*.

2. *[Remedies] Corrective action(s)* shall—

A. Be protective of the *[public] human* health and the environment;

B. Attain the groundwater protection standard *[as specified pursuant to subparagraph (11)(C)6.E. of this rule]*; and

C. Control the source(s) of releases so as to reduce or eliminate, to the maximum extent practicable, further releases of constituents listed in Appendix I, II, III, or IV of this rule into the environment that may pose a threat to human health or the environment~~;~~ and~~].~~

[D. Comply with standards for management of wastes as specified in paragraph (12)(C)4.]

3. In proposing a *[remedy that meets the standards of paragraph (12)(B)2. of this rule] corrective action*, the owner/operator~~,~~ and, in approving a remedy, the department~~]~~ shall *[consider] include* the following evaluation factors:

A. The long- and short-term effectiveness and protectiveness of the potential *[remedy] action(s)*, along with the degree of certainty that the remedy will prove successful based on consideration of the following:

(I) Magnitude of reduction of existing risks;

(II) Magnitude of residual risks in terms of likelihood of further releases due to waste remaining following implementation of the proposed remedy;

(III) The type and degree of long-term management *[required]*, including monitoring, operation, and maintenance;

(IV) Short-term risks that might be posed to the community, workers, or the environment during implementation of the *[remedy] corrective action(s)*, including potential threats to human health and the environment associated with excavation, transportation and redisposal, or containment;

(V) Time until full protection is achieved;

(VI) Potential for exposure of humans and environmental receptors to remaining waste~~s/~~, considering the potential threat to human health and the environment associated with excavation, transportation, redisposal, or containment;

(VII) Long-term reliability of the engineering and institutional controls; and

(VIII) Potential need for replacement of the *[remedy] corrective action(s)*;

B. The effectiveness of the *[remedy] corrective action(s)* in controlling the source to reduce further releases based on consideration of the following factors:

(I) The extent to which containment practices will reduce further releases; and

(II) The extent to which treatment technologies may be used;

C. The ease or difficulty of implementing the potential *[remedy(ies)] corrective action(s)* based on consideration of the following types of factors:

(I) Degree of difficulty associated with constructing the [remedy] **corrective action(s)** technology;

(II) Expected operational reliability of the proposed technologies;

(III) Need to coordinate with and obtain necessary approvals and permits from other agencies;

(IV) Availability of necessary equipment and specialists; and

(V) Available capacity and location of needed treatment, storage, and disposal services; and

D. The degree to which community concerns are addressed by the proposed [remedy(ies)] **corrective action(s)**.

4. The owner/operator shall specify as part of the proposed [remedy] **corrective action(s)** a schedule(s) for initiating and completing [remedial activities] **corrective action(s)**. This schedule shall require the initiation of [remedial activities] **corrective action(s)** within a reasonable period of time [taking into consideration the factors set forth in subparagraphs (12)(D)4.A. through H. of this rule]. The owner/operator shall [consider] **include** the following factors in [determining, and the department will consider the following factors in approving, the schedule of remedial activities] **selecting corrective action(s)**:

A. Extent and nature of contamination;

B. Practical capabilities of remedial technologies in achieving compliance with groundwater protection standards [established under subparagraph (11)(C)6.E. of] **pursuant to** this rule and other objectives of the remedy;

C. Availability of treatment or disposal capacity for wastes managed during implementation of the [remedy] **corrective action(s)**;

D. Desirability of utilizing technologies that are not currently available, but which may offer significant advantages over already available technologies in terms of effectiveness, reliability, safety, or ability to achieve remedial objectives;

E. Potential risks to human health and the environment from exposure to contamination prior to completion of the [remedy] **corrective action(s)**;

F. Resource value of any affected aquifer including:

(I) Current and future uses;

(II) Proximity and withdrawal rate of users;

(III) Groundwater quantity and quality;

(IV) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to the waste constituent;

(V) The hydrogeologic characteristic(s) of the facility and surrounding land;

(VI) Groundwater removal and treatment costs; and

(VII) The cost and availability of alternative water supplies;

G. Practicable capability of the owner/operator; and

H. Other relevant factors.

5. The department may determine that remediation of a release of any constituent listed in Appendix I, II, III, or IV of this rule from a [sanitary] landfill is not necessary if the owner/operator demonstrates to the satisfaction of the department that—

A. The groundwater is additionally contaminated by substances that have originated from a source other than [a sanitary] the landfill and those substances are present in concentrations such that cleanup of the release from the [sanitary] landfill unit would provide no significant reduction in risk to actual or potential receptors;

B. The constituent(s) is present in groundwater that—

(I) Is not a current or potential source of drinking water; and

(II) Is not hydraulically connected with waters to which the hazardous constituents are migrating or are likely to migrate in a concentration(s) that represents a statistically significant increase over background concentrations;

C. Remediation of the release(s) is technically impracticable; or

D. Remediation would result in unacceptable cross-media impacts.

6. A determination by the department pursuant to paragraph [(12)/(10)(B)5. of this rule shall not affect the authority of the state to require the owner/operator to undertake source control measures or other measures that may be necessary to eliminate or minimize further releases to the groundwater, to prevent exposure to the groundwater, or to remediate the groundwater to concentrations that are technically practicable and which significantly reduce threats to human health or the environment.

(C) Implementation of the Corrective Action(s) Program.

1. Based on the schedule established [under paragraph (12)(B)4. of this rule] for initiation and completion of [remedial activities] **corrective action(s)**, the owner/operator shall—

A. Establish and implement a corrective action(s) groundwater monitoring program that—

(I) At a minimum, meets the requirements of an assessment monitoring program [under paragraph (11)(C)6.] of this rule;

(II) Indicates the effectiveness of the corrective action(s) [remedy]; and

(III) Demonstrates compliance with the groundwater protection standard [pursuant to subparagraph (11)(C)6.E. of this rule].

B. Implement the corrective action(s) [remedy] selected [under subsection (12)(B) of this rule]; and

C. Take any interim [measures] **corrective action(s)** necessary, any [measures] **action(s)** determined to be necessary by the department, or both, to ensure the protection of human health and the environment. Interim [measures] **corrective action(s)** shall, to the greatest extent practicable, be consistent with the objectives of and contribute to the performance of any [remedy that may be required pursuant to subsection (12)(B) of this rule] **action(s) selected**. The following factors shall be considered by an owner/operator, and will be considered by the department, in determining whether interim [measures] **action(s)** are necessary:

(I) Time [required] to develop and implement a final remedy;

(II) Actual or potential exposure of nearby populations or environmental receptors to hazardous constituents;

(III) Actual or potential contamination of drinking water supplies or sensitive ecosystems;

(IV) Further degradation of the groundwater that may occur if [remedial] a **corrective action(s)** is not initiated expeditiously;

(V) Weather conditions that may cause hazardous constituents to migrate or be released;

(VI) Risks of fire, [or] explosion, or potential for exposure to hazardous constituents as a result of an accident or failure of a container or handling system; and

(VII) Other situations that may pose threats to human health and the environment.

2. The department may determine, based on information developed after implementation of the [remedy] **corrective action(s)** has begun, or other information, that compliance [with requirements of paragraph (12)(B)2. of this rule are] is not being achieved through the [remedy] **action(s)** selected. In those cases, the owner/operator shall implement other methods or techniques that will achieve compliance with the requirements, unless the department makes the determination under paragraph [(12)/(10)(C)3. of this rule].

3. If the department determines that compliance [with requirements under paragraph (12)(B)2. of this rule] cannot be practically achieved with any currently available methods, the owner/operator shall—

A. Obtain the certification of a qualified groundwater scientist and approval from the department that compliance [with the requirements under paragraph (12)(B)2.] cannot be practically

achieved with any currently available methods;

B. Implement alternative *[measures]* **corrective action(s)** to control exposure of humans or the environment to residual contamination, as necessary, to protect human health and the environment;

C. Implement alternative *[measures]* **corrective action(s)** for control of the sources of contamination, or for removal or decontamination of equipment, units, devices, or structures that are—

(I) Technically practicable; and

(II) Consistent with the overall objective of the *[remedy]* **corrective action(s)**; and

D. Submit a report to the department justifying the alternative *[measures]* **corrective action(s)**. The alternative *[measures]* **action(s)** must be approved by the department prior to implementation.

4. All solid wastes that are managed pursuant to a *[remedy required under subsection (12)(C)]* **corrective action(s) plan** or an interim *[measure required under subparagraph (12)(C)1.C. of this rule]* **corrective action(s) plan** shall be managed in a manner—

A. That is protective of the *[public]* **human** health and the environment; and

B. That complies with all applicable state and federal requirements.

5. Remedies selected pursuant to *[subsection (12)(B) of]* this rule shall be considered complete when—

A. The owner/operator complies with the groundwater protection standards established under *[subparagraph (11)(C)6.E. of]* this rule at all points within the plume of contamination;

B. Compliance with the groundwater protection standards *[established under subparagraph (11)(C)6.E. of this rule]* has been achieved by demonstrating that concentrations of all constituents listed in Appendix I, II, III, or IV of this rule have not exceeded the groundwater protection standard(s) for a period of three (3) consecutive years using the **approved** statistical procedures and performance standards *[in subsection (11)(C)]*. The department may specify an alternative length of time during which the owner/operator shall demonstrate that concentrations of all constituents listed in Appendix I, II, III, or IV of this rule have not exceeded the groundwater protection standard(s) taking into consideration—

(I) Extent and concentration of the release(s);

(II) Behavioral characteristics of the hazardous constituents in the groundwater;

(III) Accuracy of monitoring or modeling techniques, including any seasonal meteorological, or other environmental variabilities that may affect the accuracy; and

(IV) Characteristics of the groundwater; and

C. All actions required to complete the *[remedy]* **corrective action(s) plan** have been completed.

6. Upon completion of the *[remedy]* **corrective action(s)**, the owner/operator shall submit a certification to the department within fourteen (14) days after the *[remedy]* **corrective action(s)** has been completed *[in compliance with the requirements of paragraph (12)(C)5.]* and shall place a copy of the certification in the facility's operating record. The certification shall be signed by the owner/operator and by a qualified groundwater scientist and approved by the department.

7. When, upon completion of the certification, the owner/operator and the department determine/s/ that the corrective action(s) *[remedy]* has been completed *[in accordance with the requirements under paragraph (12)(C)5. of this rule]*, the owner/operator shall be released from the requirements for financial assurance for corrective action under 10 CSR 80-2.030(4)(C).

[(13)](11) Air Quality.

(A) *[Requirement.]* The design, construction, and operation of the sanitary, **demolition**, or **special waste** landfill shall minimize *[environmental]* **impacts** or hazards to human health or the envi-

ronment and shall *[conform to]* **comply with** applicable ambient air quality and source control regulations.

(B) *[Satisfactory Compliance—]* Design. *Plans* and **operational plans** shall include a description of efforts to be taken to prevent off-site emissions, including an effective dust and odor control program.

(C) *[Satisfactory Compliance—Operations. Burning of solid waste shall be prohibited. A burning permit or exemption may be obtained from the department permitting the burning of tree trunks, tree limbs, vegetation and untreated waste lumber. In areas operating under exemption certificates authorized by Chapter 643, RSMo approval shall be obtained from the local pollution control agency. The operating procedures and location for burning practices shall be submitted to the department for review and written approval.]* Operation and maintenance of the landfill gas collection and control system shall be in accordance with the Missouri Solid Waste Management Law and Missouri Clean Air Law.

(D) The landfill owner/operator shall take steps to prevent excessive odors or dust or any leachate spray from application to the working face, from leaving the landfill property.

(E) Burning at the *[sanitary]* landfill shall be conducted in accordance with Chapter 643, RSMo, the corresponding rules, the terms conditions, or both, of the plans, permit, or both, and all local requirements. In areas operating under exemption certificates authorized by Chapter 643, RSMo, approval shall be obtained from the local air pollution control agency. Burning within the permitted boundary of a sanitary or demolition landfill shall be limited to tree trunks, tree limbs, and vegetation resulting from land clearing related to landfill operation/development and only after receiving a burn permit or exemption from the department. Burning of all other solid waste is prohibited on the landfill property.

(12) Landfill Gas Monitoring.

(A) The sanitary or demolition landfill owner/operator shall implement a landfill gas monitoring program as outlined in Subsection (12)(C) prior to receiving an operating permit. Requirements for implementing a landfill gas monitoring plan at special waste landfills will be determined by the department on a case-by-case basis.

(B) The department may apply some or all of the requirements of this section to the design and maintenance of any landfill that has ceased accepting waste if the department determines there is evidence of an existing or potential safety concern or an existing or potential environmental impact, either of which that can be attributed to the adverse effects of landfill gas migrating from the landfill.

(C) Owners/operators of sanitary or demolition landfills receiving waste on or after the effective date of this rule shall develop a landfill gas monitoring plan prepared by an independent professional engineer capable of detecting landfill gases in the most likely zone(s) of migration to ensure concentrations of methane gas do not exceed limits set out in this rule. The plan shall describe the monitoring systems, equipment, and procedures that will be utilized to detect methane that is generated in the landfill and may accumulate in structures or migrate through the subsurface beyond the landfill property boundary.

1. The landfill gas monitoring plan shall include the following:

A. Provisions for monitoring the subsurface for migration of methane utilizing a network of landfill gas compliance monitoring wells installed within the permitted boundary.

(I) Gas monitoring well and well network – design and construction.

(a) Wells shall be designed and installed to monitor all unsaturated zones down to an elevation equal to the bottom elevation of waste at the lowest point in the landfill and include

all site-specific information used as a basis for the design, construction, installation, and monitoring of the wells.

(b) The maximum spacing between landfill gas compliance monitoring wells shall be five hundred feet (500') at any two adjacent well locations, unless the department approves documentation provided in the landfill gas monitoring plan that a hydrologic or topographic barrier to methane migration exists in a specific area of the site.

(c) The owner/operator shall assess the need for a closer well spacing to provide monitoring for:

I. Enclosed structures located within one thousand feet (1,000') of the permitted boundary;

II. Underground utility lines, trenches, vaults, manholes, and any other potential confined space(s) that are located within the permitted boundary or within one thousand feet (1,000') of the permitted boundary, and may require entry by a worker or property owner, or that could act as a conduit for landfill gas flow;

III. Any known natural subsurface gas migration pathways, based on documentation of the geologic, hydrologic, and topographic conditions of the site and the surrounding property located within one thousand feet (1,000') of the permitted boundary;

IV. Any known manmade subsurface gas migration pathways, based on knowledge of the site and the surrounding property; and

V. Any area of the site that was subject to historical methane migration assessments or investigation.

(d) The department may waive the requirement to install landfill gas compliance monitoring wells within a specific defined area provided the landfill owner/operator demonstrates to the department that a hydrologic or topographic barrier exists between the landfill waste footprint and the permitted boundary within the defined area. The demonstration(s) shall be submitted to the department with, or as an addendum to, the landfill gas monitoring plan, and shall address the following:

I. Hydrologic barrier. This requires the owner/operator to submit documentation to the department, reviewed, signed, and sealed by an independent registered geologist, that hydrologic conditions exist within the defined area that preclude the migration of landfill gas onto an adjacent property. To be classified as a hydrologic barrier, the hydrologic conditions must meet the following criteria:

a. The subsurface is continuously saturated in a zone defined by a vertical surface that exists between the landfill footprint and the permitted boundary and extends horizontally the entire width of the defined area, and extends vertically from an elevation equal to or lower than the bottom elevation of waste at the lowest point within the landfill footprint to an elevation equal to or greater than the elevation of the highest point along the permitted boundary within the defined area; and

b. The saturated conditions are permanent (i.e. not seasonal or weather dependent) within the defined area; and

II. Topographic barrier. This requires the owner/operator to submit documentation to the department, reviewed, signed, and sealed by an independent professional engineer, that the ground surface elevation along a continuous contour line between the landfill footprint and the permitted boundary and extending the entire width of the defined area, is below the bottom most elevation of any waste located within one thousand feet (1,000') of the defined area.

B. Provisions for monitoring for methane in each enclosed structure or confined space located within the permitted boundary of the landfill.

(D) Landfill Gas Monitoring Well Network – Operation and Maintenance.

1. Wells shall be constructed, installed, maintained, and plugged in accordance with the Missouri Monitoring Well

Construction Code, 10 CSR 23-4.

2. The survey coordinates and the top-of-casing elevation for each well shall be established using conventional or GPS surveying techniques and submitted to the department with the monitoring system as-built drawings.

3. Each well shall be marked clearly in the field with a permanent placard or sign showing its identification number.

4. Each well shall be equipped with a sampling port to allow sampling without removal of the well cap.

5. All monitoring wells shall be protected from unauthorized access and kept locked and secured at all times.

6. The landfill owner/operator shall sample all landfill gas compliance monitoring wells at least quarterly, or more frequently if required by the department to protect human health or guide corrective actions.

7. The landfill owner/operator shall measure the following constituents in each landfill gas compliance monitoring well during each sampling event:

A. Methane concentration (percent methane by volume);

B. Oxygen concentration (percent oxygen);

C. Carbon dioxide concentration (percent carbon dioxide);

D. Atmospheric (barometric) pressure (inches Hg); and

E. Other constituents if the department determines that conditions at the landfill warrant the need for additional information to protect human health.

8. The landfill owner/operator shall submit all monitoring results electronically to the department within seven (7) days of collection—

A. At least quarterly, or more frequently if required due to detection of methane above limits specified in subsection (13)(C); and

B. In a format and manner prescribed by the department.

[(14) Gas Control.

(A) Requirement. Decomposition gases generated within the sanitary landfill shall be controlled on-site, as necessary, to avoid posing a hazard to the environment or to public health and the safety of occupants of adjacent property.

(B) Satisfactory Compliance—Design.

1. Plans shall contain a monitoring program capable of detecting decomposition gas migration.

A. The monitoring program must specify the type of monitoring and be based on—

(I) Soil conditions;

(II) The hydrogeologic and topographic conditions surrounding the facility; and

(III) The location of facility structures, property boundaries, and off-site features.

B. The monitoring program described the plans must include:

(I) A written description of the monitoring system, including spacing of monitoring locations and frequency of monitoring;

(II) The results of any gas assessment that has been performed;

(III) The location of all gas monitoring wells shown on a plan sheet;

(IV) A drawing detailing the typical gas monitoring well design;

(V) The design depths and bottom elevations of the gas monitoring wells; and

(VI) Boring logs that support the design gas monitoring well depths.

C. The gas monitoring specified in the plans shall be performed at gas monitoring wells. The monitoring program shall specify how buildings on the landfill property are to be monitored. Gas monitoring wells shall be designed to monitor

the unsaturated soil and rock down to an elevation equal to the bottom elevation of the landfill. Gas monitoring wells shall be placed between the landfill and off-site buildings and other features that may be harmed by landfill gas or may easily transmit gas from the landfill. Gas monitoring well locations at the property boundary shall not be more than five hundred feet (500') apart unless the permittee can show that the potential for gas migration is low.

2. Plans shall assess the need for gas control and indicate the location and design of any vents, barriers or other control measure to be provided.

A. The gas control system shall be constructed of materials that are chemically resistant to the solid wastes managed in the sanitary landfill and the gas expected to be generated. These materials shall be specified in the engineering report and the choice of materials justified.

B. The gas control system shall be constructed of materials that are of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying solid wastes, cover and by any equipment used at the sanitary landfill. Overburden pressure calculations, material specifications and system installation procedures shall be included in the engineering report.

C. Maintenance and repair options shall be considered in the design and specified in the engineering report.]

(13) **Landfill Gas Collection and Control.** Landfills accepting waste with the potential to generate methane shall be designed to prevent the migration of methane gases generated by the waste fill through an active gas collection and control system to avoid posing a hazard to the health and safety of the public and landfill personnel, or creating a negative impact to the environment. The department may apply some or all of the requirements of this section to the design of any landfill that has ceased accepting waste, if the department determines there is evidence of an existing or potential human health concern or an existing or potential environmental impact, either of which can be attributed to the adverse effects of landfill gas migrating from the landfill. Unless notified otherwise by the department, owners/operators of landfills that are inactive or officially closed shall design the landfill to control methane in accordance with the regulations in effect at the time the landfill ceased receiving waste.

(A) Design.

1. Owners/operators of landfills receiving waste on or after the effective date of this rule shall submit to the department a design for an active landfill gas collection and control system to service areas of the landfill that warrant control, unless such design for an active landfill gas collection and control system has already been submitted and approved by the department. The system shall be designed to prevent the migration of methane through the subsurface into enclosed structures within the permitted boundary and/or onto surrounding properties.

2. The plans for the design and operation of the landfill gas collection and control system shall, at a minimum, include the following:

A. Drawings that show the layout and locations of all landfill gas, gas condensate, and, if applicable, pneumatic control system components and equipment, specifications of all piping systems, locations of all components, trench specifications, and system connections and piping configurations for all components;

B. Calculations verifying design and flow capacity over the intended use of the gas collection and control system;

C. Design specifications for all materials, components, and equipment used in the landfill gas collection and control system;

D. A landfill gas collection well schedule indicating, for each well, the approximate elevation of the landfill surface at the location of the well, the proposed elevation of the top of base liner

at the location of the well, the proposed length of slotted and solid pipe in the well, and the proposed depth of the well;

E. A well construction diagram (cross-section drawing) illustrating the design details for a typical landfill gas collection well, and showing the diameter of the borehole, the material specifications for the well riser, the dimensions and material specifications for the borehole seals, the dimensions and material specifications for the filter pack, and the type of surface completion;

F. Construction diagrams illustrating the design details for all collection points, including but not limited to the horizontal collection trenches, passive systems, or surface collection components;

G. A description of when the system is to be installed in each phase or cell of the landfill, with respect to overall landfill development. Showing the conceptual sequence of installation of the landfill gas collection and control system on the phase development drawings pursuant to subsection (4)(G) of this rule satisfies this requirement; and

[D./H. All applicable permits and approvals necessary to comply with the requirements of the Missouri Air Conservation Law and rules [promulgated shall be obtained from the department].

[E. The plan shall estimate the maximum anticipated rate of gas generation at the disposal area and the length of time over which it is anticipated to be generated. The method by which these calculations are arrived at shall also be included.

(C) Satisfactory Compliance—Operations.

1. Decomposition gases shall not be allowed to migrate laterally from the sanitary landfill to endanger public health and safety or to pose a hazard to the environment. They shall be controlled on-site, flared or vented to the atmosphere directly through the cover, cut-off trenches or ventilation systems in a way that they do not accumulate in explosive or toxic concentrations, especially within structures. (Information on the limits of flammability of gases is available in such references as the Handbook of Chemistry and Physics, 68th ed. Cleveland, Chemical Rubber Publishing Co., 1987.)

2. Decomposition gases shall not be allowed to concentrate above the following levels:]

3. All landfill gas collection wells installed in waste shall be designed such that the bottom of the well borehole is not less than ten feet (10') above the top of the landfill liner.

4. The owner/operator also shall submit to the department a detailed operating and maintenance plan for the landfill gas collection and control system installed within the landfill footprint, and any landfill gas collection and control systems external to the landfill footprint. The operating and maintenance plan shall address the system(s) in its entirety and each system component individually.

5. The department may approve the use of an alternative gas system design on a case-by-case basis.

(B) Operation.

1. The owner/operator of a landfill shall control landfill gas on site so that it will not accumulate in explosive or toxic concentrations and migrate laterally from the waste footprint to endanger the health of landfill employees or the public, or pose a threat to the environment.

2. The department may require landfill owners to install portions of the approved landfill gas collection and control system, or to install an interim landfill gas collection and control system, in specific areas of the landfill as necessary to control landfill gas.

3. The system shall be adjusted (tuned) as needed to optimize performance. The landfill owner/operator shall, in a timely manner, investigate the reason for reduced performance and

make any necessary adjustment to, repair of, or replacement of a system component or components to return the system performance to optimal levels.

4. The system shall be maintained in accordance with the approved operating and maintenance plan(s).

5. The owner/operator shall inspect all components and portions of the system at least monthly.

6. The leachate level in landfill gas collection wells installed in the waste mass shall be checked and controlled at least quarterly to prevent methane migration and odors and ensure efficient operation of the collection wells.

(C) Methane shall not be allowed to accumulate above the following concentrations:

[A.]1. Twenty-five percent (25%) of the lower explosive limit (LEL) or one and one-quarter percent (1.25%) methane by volume [for methane] in [buildings on] air in enclosed structures within the [sanitary landfill property; and] permitted boundary;

[B.]2. Fifty percent (50%) of the LEL or two and one-half percent (2.5%) by volume for methane in the soil at the property boundary of the [sanitary] landfill[.];

3. For purposes of this section, [lower explosive limit/[LEL/]] means the lowest percent by volume of a mixture of explosive gases in air that will propagate a flame at twenty-five degrees Celsius (25°C) and atmospheric pressure.

[4. Owners/operators of all sanitary landfills shall implement a methane monitoring program capable of detecting decomposition gas migration in the most likely zone(s) of migration, to ensure that the standards of paragraph (14)(C)2. of this rule are met. Methane monitoring shall be conducted at least quarterly with equipment warranted by the manufacturer to detect explosive gases under the conditions the equipment is to be used. Facilities shall submit the results of this methane monitoring to the department at least quarterly. The electronic submission of methane monitoring data is required. This submission shall be in a format and manner as prescribed by the department.

5. If methane gas levels exceeding the limits specified in paragraph (14)(C)2. of this rule are detected, the owner/operator shall—

A. Notify the department and immediately take all necessary steps to ensure protection of public health and safety which include:

(I) When results of monitoring in on-site or off-site structures indicate levels in excess of those specified, the operator shall take appropriate action to mitigate the effects of landfill gas accumulation in those structures until a permanent remediation is completed. Actions which must be undertaken include:

(a) Notification of the fire department or other appropriate local public safety authorities;

(b) Notification of adjacent property owners and/or occupants;

(c) Ventilation of any confined spaces that may trap decomposition gases or the installation of alarm systems in any confined spaces that may trap decomposition gases; and

(d) Establishment of a temporary methane monitoring program in affected structures.

B. Within seven (7) days of detection, submit to the department a report describing the steps taken to protect public health and safety;

C. Within sixty (60) days of detection, submit to the department for approval a remediation plan designed by a professional engineer for the methane gas releases. A gas control system shall be designed to—

(I) Prevent methane accumulation in on-site and off-site buildings;

(II) Reduce methane concentrations at monitored

property boundaries to below compliance levels; and

(III) Reduce methane concentrations off-site to below compliance levels;

D. Landfill gas corrective action plans shall describe the nature and extent of the problem and the proposed remedy. The plan shall be implemented upon departmental approval; and

E. The department may establish alternative schedules for demonstrating compliance with subparagraphs (14)(C)5.B. and C. of this rule.

6. The sanitary landfill shall operate in compliance with all applicable requirements of Chapter 643, RSMo and corresponding rules.]

(14) Landfill Gas Corrective Action. In the event methane or other landfill gases are detected migrating from the landfill waste footprint and accumulating above the concentrations specified in this rule, the landfill owner/operator shall take immediate action to protect the health and safety of the public and landfill personnel and any threat to the environment. The owner/operator shall then take appropriate and timely corrective actions to control the landfill gas and alleviate the migration of methane onto any surrounding properties, or into enclosed structures or underground utility structures, as the situation warrants.

(A) Corrective Action. The landfill owner/operator shall take the following actions upon detection of elevated methane concentrations in structures and in the soil at the property boundary of the landfill.

1. Once the determination has been made to keep people out of any structure or away from any area, immediately notify the following parties that methane gas exceedance has been discovered:

A. Fire department or local emergency management personnel;

B. The department; and

C. Owners and occupants of properties within one thousand feet (1000') of any compliance monitoring well exhibiting concentrations above the limit(s) provided in (13)(C) of this rule.

2. For concentrations of landfill gas(es) detected in on- or off-site structures, or both, above the limit(s) provided in (13)(C) of this rule, immediately take all appropriate actions to mitigate the effects of landfill gas accumulation in those structures until a permanent remediation is completed. These corrective actions may include, but are not limited to:

A. Emergency actions required by the fire department or local emergency management personnel, as needed, to protect employee, and human health and safety;

B. Ventilate any confined spaces that may trap landfill gases or install landfill gas detectors in confined spaces that may accumulate landfill gases; and

C. Establish a temporary landfill gas monitoring program in affected structures using an increased monitoring frequency from the frequency in (12)(D)8. of this rule.

3. Once methane migration has been confirmed, the department may establish alternative, more frequent, schedules for monitoring, notification, and implementation of corrective actions, as needed, to protect the health and safety of landfill employees, the public, and the environment.

4. Within seven (7) days of detection, submit to the department a report describing the notification process and steps taken to protect employee and public health and safety;

5. Within forty-five (45) days of detection, submit to the department for approval a corrective action plan designed by a professional engineer to address the gas migration. The plan shall investigate the reason for the migration, describe the nature and extent of the migration, and propose a remedy to correct the migration. The department shall approve or disapprove the plan within fourteen (14) days of receipt.

6. If the landfill is experiencing ongoing methane gas migration, the owner/operator shall notify the department:

A. Within twenty-four (24) hours of discovering that the landfill gas collection and control system has been damaged, that a complete failure has occurred, or that a significant portion of the system has been taken out of service as a result of a malfunction; and

B. At least seven (7) days in advance of any scheduled activity that requires taking all or part of the landfill gas collection and control system off line or out of service for longer than twenty-four (24) hours if the landfill has methane gas migration.

7. If upon completion of the department's review of the corrective action plan, the department finds the plan does not provide sufficient data to support the corrective actions proposed in the plan, the department shall deny the plan. The landfill owner/operator shall submit a revised corrective action plan within thirty (30) days of the department's denial of the original corrective action plan.

8. Once the corrective action plan has been approved by the department, the landfill owner/operator shall implement the plan within one hundred and twenty (120) days or an alternative timeframe approved by the department, monitor results of corrective actions taken, analyze and report to the department on the impact of corrective actions taken, and continue to propose and implement approved corrective actions until the methane gas concentrations fall to within compliance limits.

9. When the methane concentrations in all landfill gas compliance wells fall to below limits provided in (13)(C) of this rule and remain there for longer than one (1) month's time, the department will allow the resumption of a gradually reduced monitoring frequency. After one year of methane concentrations remaining below the limits provided in (13)(C) of this rule, the landfill owner/operator may petition and receive approval from the department to return to a quarterly landfill gas monitoring schedule.

(15) Vectors.

[(A) Requirements. Conditions shall be maintained] The landfill owner/operator shall operate and maintain the landfill in a manner that *[are]* is unfavorable for the harboring, feeding, and breeding of vectors and immediately implement those procedures when vectors are first observed.

[(B) Satisfactory Compliance—Design. Plans] The landfill operating manual shall include contingency *[programs]* plans for vector control, and the owner/operator shall be prepared *[at all times]* to immediately implement those procedures.

[(C) Satisfactory Compliance—Operations. Vector control contingency programs shall be implemented] when *[necessary to prevent or rectify vector problems]* vectors are observed.

(16) Aesthetics.

(A) [Requirement.] The sanitary, demolition, or special waste landfill owner/operator shall *[be designed and operated at all times]* operate the landfill in an aesthetically acceptable manner.

[(B) Satisfactory Compliance—Design. Plans shall include an effective litter control facility and operating program.]

(C) Satisfactory Compliance—Operations.

1. Portable litter fences or other devices shall be used in the immediate vicinity of the working face and at other appropriate locations to control blowing litter. At the end of each operating day, or more often as required, litter shall be removed from the fences and the ground and incorporated into the cell being used. Alternatively, the litter may be containerized for disposal on the next operating day.

*[2.](B) [Solid w/]*Wastes that are easily moved by wind shall be covered, as necessary, to prevent becoming airborne and scattered./., and the landfill shall employ effective litter control methods and

best management practices to prevent litter from leaving the permitted area of the landfill.

[3.](C) On-site vegetation should be cleared only as necessary. Natural windbreaks, such as green belts, should be maintained where they will reduce noise, dust, and odors, and improve the appearance and operation of the *[sanitary]* landfill.

[4. Salvage operations shall be conducted in such a manner as to not detract from the appearance of the sanitary landfill. Salvaged materials shall be removed from the sanitary landfill daily or stored in aesthetically acceptable containers or enclosures.]

(17) Cover.

(A) [Requirement.] Cover shall be applied at the landfill to minimize fire hazards, infiltration of precipitation, odors and blowing litter; control gas venting and vectors; discourage scavenging; and provide a pleasing appearance.

(B) [Satisfactory Compliance—Design.] The owner/operator shall *[prepare]* include in the landfill's operating plan a description of daily and intermediate cover at the landfill and also submit a written closure/post-closure plan that *[describes the steps necessary to close all sanitary landfill phases at any point during the active life of]* includes the *[sanitary landfill]* design and construction of a final cover system over each phase or cell as it reaches the approved final elevation, in accordance with *[the requirements of 10 CSR 80-2.030(4)(A). In addition, the final cover requirements specified in the closure and post-closure plans]* this rule.

1. The operating plan shall *[specify—]* include:

[1.](A. [Cover]) The proposed cover sources, quantities, and soil classifications (Unified Soil Classification System or United States Department of Agriculture classification system)/.; Soil classification is not necessary for soils used for daily and intermediate cover;

[2.](B. The capability of the cover to perform the functions listed [in subsection (17)(A) of this rule] above; and

C. Design, construction, and operations that ensure active, intermediate, and final slopes shall not exceed thirty-three and one-third percent (33 1/3%);

2. The closure/post-closure plan shall include:

A. A description of how the operating plan shall prepare the landfill for closure and the procedures to establish and maintain vegetative growth to combat erosion and improve appearance of idle and completed areas, include fertilizer rate, soil conditioning rate, seeding rate, and provisions for mulching;

B. Procedures to maintain cover integrity, for example, regrading and recovering;

C. Methods for borrow areas to be reclaimed on site so as to restore aesthetic qualities and prevent excessive erosion;

D. Provisions for construction of the final slope of the top of the landfill to have a minimum slope of five percent (5%);

[3.](E. [Surface grades and side slopes needed to]) A design of the final side slopes to minimize infiltration, promote *[maximum]* runoff/., without excessive erosion, *[to minimize infiltration. Final side slopes shall]* and not to exceed twenty-five percent (25%), unless it has been demonstrated in a detailed slope stability analysis approved by the department that the slopes can be constructed and maintained throughout the entire operational life and post-closure period of the landfill/.;

[4. Procedures to establish and maintain vegetative growth to combat erosion and improve appearance of idle and completed areas. Procedures shall include seeding rate, fertilizer rate, soil conditioning rate and provisions for mulching;

5. Procedures to maintain a cover integrity, for example, regrading and recovering;

6. Methods for borrow areas to be reclaimed so as to restore aesthetic qualities and prevent excessive erosion;

7. The final slope of the top of the sanitary landfill shall have a minimum slope of five percent (5%); and]

[8./F. Shear failure analyses [shall be included] where intermediate or final slopes exceed twenty-five percent (25%). However, the department will waive the analysis for slopes of twenty-five percent (25%) or less, except in seismic impact zones[.];

[(C) Satisfactory Compliance—Operations.

1. Cover shall be applied by the end of each operating day regardless of weather; sources of cover, therefore, shall be accessible on all operating days. The thickness of the compacted cover shall not be less than six inches (6"). Sanitary landfills operating twenty-four (24) hours per day shall incorporate all solid waste into one (1) or more cells at least every twenty-four (24) hours. Where a liner and leachate collection system are in place, an alternative daily cover may be approved by the department on a site-specific basis, if the owner/operator demonstrates that the alternative material controls run-on, runoff, disease vectors, fires, odors, blowing litter and scavenging without presenting a threat to human health and the environment.

2. Cover shall be increased to a total thickness of at least one foot (1') of compacted cover on filled areas of the sanitary landfill which are idle for more than sixty (60) days.

3. No active, intermediate or final slope shall exceed thirty-three and one-third percent (33 1/3%).

4. As each phase of the sanitary landfill is completed, a final cover system shall be installed at portions of—]

G. The design and installation of the geomembrane liner, which is to be in intimate contact with the underlying compacted clay;

H. The design and installation of the final cover system(s) and provisions for slope stability; and

I. A final cover system installation schedule as each phase of the landfill reaches approved elevations.

[A./3. [Existing] For [sanitary] landfills with[out] composite liners[.], final cover shall be designed and constructed in composite layers, in order from top to bottom, as follows:

A. Two feet (2') of soil capable of sustaining vegetative growth;

B. A drainage layer;

C. A geomembrane liner at least as thick as the minimum thickness specified in subsection (4)(I); and

D. One foot (1') of compacted soil with a coefficient of permeability of 1×10^{-5} cm/sec or less;

4. For existing landfills without composite liners, [This] the final cover shall consist of at least two feet (2') of compacted [clay with] soil with a coefficient of permeability of 1×10^{-5} cm/sec or less and overlaid by at least one foot (1') of soil capable of sustaining vegetative growth[.];

[B. Sanitary landfills with composite liners. This final cover shall consist of component layers, in order from top to bottom, as follows:

(I) Two feet (2") of soil capable of sustaining vegetative growth;

(II) A drainage layer;

(III) A geomembrane liner at least as thick as the geomembrane liner described in subparagraph (10)(B)1.G.;

(IV) One foot (1") of compacted clay with a coefficient of permeability of 1×10^{-5} cm/sec or less; and

C. The geomembrane liner shall be in intimate contact with the underlying compacted clay.

5. The installation of the final cover systems shall include provisions for slope stability.]

(C) Operations – Cover.

1. For sanitary landfills, no less than six inches (6") of cover shall be applied by the end of each operating day, regardless of weather, unless an alternative is approved by the department. The practice of peeling back and reusing cover is an approved

practice so long as the methodologies and practice is contained in the operating plan. Sanitary landfills operating twenty-four (24) hours per day shall cover the waste at least once every twenty-four (24) hours.

2. For demolition landfills, no less than twelve inches (12") of cover shall be applied at least once at the end of each operating week or immediately before the facility closes if the facility is to be closed for more than twenty-four (24) hours.

3. Alternative daily cover.

A. An alternative daily cover may be approved by the department on a site-specific basis, if the landfill owner/operator demonstrates that the alternative material controls storm water run-on and runoff and prevents disease, vectors, fires, odors, and blowing litter, without presenting a threat to human health and the environment.

B. In the event the use of an alternative daily cover is approved by the department, the landfill owner/operator shall make all efforts to ensure that the use of alternative daily cover does not contribute to increased odor generation, leachate generation, litter blowing from the working face, or attraction of vectors.

4. Surface grades and side slopes shall be constructed and maintained to promote runoff without excessive erosion.

5. Re-grading and recovering shall be performed as necessary, followed by re-establishing vegetation, to maintain landfill cover, slope, and integrity.

6. In areas of the landfill where waste has not been accepted for more than sixty (60) days, cover shall be increased to a total thickness of at least one foot (1') of compacted cover, and steps taken to seed and encourage vegetative growth.

7. All final side slopes and the slope of the top of the landfill shall be constructed with provisions for slope stability and subsequently maintained to comply with the landfill's approved closure/post-closure plan.

8. Final cover at the landfill shall be constructed and installed in accordance with the landfill's approved closure/post-closure plan.

[6./9. The department may approve the use of an alternative final cover system provided that the owner/operator can demonstrate to the department that the alternative design will be at least equivalent to the final cover system described in [paragraph (17)(C)3. of] this rule.

[7. Surface grades and side slopes shall be maintained to promote runoff without excessive erosion.]

10. Borrow areas shall be reclaimed in accordance with the approved plans.

[8./11. Vegetation shall be established within one [hundred eighty (180) days of application of the cover required by paragraphs (17)(C)2. and 3. of this rule. Vegetation shall be] (1) year or other schedule approved by the department and maintained and re-established [and maintained to minimize erosion and] as necessary to achieve greater than eighty percent (80%) coverage to protect the landfill cap and prevent surface water infiltration.

[9. Regrading and recovering shall be performed as necessary to maintain cover slope and integrity.

10. Borrow areas shall be reclaimed in accordance with the approved plans.

11. The compacted clay portion of the final cover shall consist of soils classified under the Unified Soil Classification System as CH, CL, ML, SC or MH.]

(18) Compaction.

(A) [Requirement.] In order to conserve sanitary, demolition, or special waste landfill site capacity, thereby preserving land resources and minimizing moisture infiltration and settlement, solid waste and cover shall be compacted to the smallest practicable volume.

[(B) Satisfactory Compliance—Design.

1. Arrangements shall be made and indicated in the plans where substitute equipment will be available to provide uninterrupted service during routine maintenance periods or equipment breakdowns.

2. The plans shall specify the equipment that should be available to conduct the sanitary landfill operation at the projected solid waste loading.

(C) Satisfactory Compliance—Operations.

1. Solid waste handling equipment, on any operating day shall be capable of performing and shall perform the following functions:

A. Spread the solid wastes to be compacted in layers no more than two feet (2') thick, while confining it to the smallest practicable area;

B. Compact the spread solid wastes to the smallest practicable volume; and

C. Place, spread and compact the cover as much as practicable.

2. A preventive maintenance program should be employed to maintain equipment in operating order.

3. No solid waste shall be disposed of in water where the presence of the water will prohibit the proper spreading and compaction of the solid waste or where a mosquito breeding problem would be created.]

(B) The size of the working face shall be kept to a minimum.

(C) Equipment shall be maintained on site or readily available to ensure uninterrupted operations.

(19) Safety.

[(A) Requirement.] The sanitary, **demolition, or special waste** landfill shall be designed, constructed, and operated *[in a manner so as]* to protect the health and safety of **landfill** personnel and *[others associated with and affected by the operation]* the public.

[(B) Satisfactory Compliance—Design.]

[1.](A) [Provisions] The landfill's operating plan shall *[be included in the plans]* include provisions to control *[and limit]* access to **and traffic on to** the *[sanitary]* landfill in a manner that is compatible with the surrounding land use.

[2.](B) Provisions shall be included in the plans to control dust, *[for safety purposes and to prevent a nuisance to the surrounding area.]* address emergency situations, and promote orderly operations. These provisions shall be revised as necessary to keep them up-to-date and relevant to the current landfill operations.

[3. The plans shall specify the facilities and methods to be provided for extinguishing fires.

(C) Satisfactory Compliance—Operation.

1. A fire extinguisher shall be provided on all solid waste handling equipment.

2. Any fires in wastes being delivered to the sanitary landfill or which occur at the working face or within equipment or personnel facilities shall be extinguished.

3. Adequate communications equipment shall be available at the sanitary landfill for emergency situations.

4. Scavenging shall be prohibited at all times to avoid injury and to prevent interference with sanitary landfill operations.

5. Access to the sanitary landfill shall be controlled and shall be by established roadways only. The sanitary landfill shall be accessible only when operating personnel are on duty. Large containers may be placed at the sanitary landfill entrance so that users can conveniently deposit solid waste after hours. The containers and the areas around them shall be maintained in a sanitary and litter-free condition.

6. Traffic signs or markers should be provided to promote an orderly traffic pattern to and from the discharge area and, if necessary, to restrict access to hazardous areas

or to maintain efficient operating conditions. Drivers of manually discharging vehicles should not hinder operation of mechanically discharging vehicles. Vehicles should not be left unattended at the working face or along traffic routes. If a regular user persistently poses a safety hazard, s/he should be barred from the sanitary landfill.]

(C) Scavenging is prohibited at all times at the landfill.

[7.](D) [Dust] The landfill owner/operator shall employ dust control provisions *[shall be utilized]* as necessary for safety purposes and to prevent a nuisance to the surrounding area.

(E) Adequate communications equipment shall be available for use by landfill personnel.

(F) The landfill owner/operator shall prepare a plan of procedures to implement in the event of emergencies that occur at the landfill, including but not limited to, slope failure or firefighting. The owner/operator shall make the plan available to landfill personnel to provide them with the appropriate emergency contact information and delegation of authority to implement during each such emergency event.

(G) A fire extinguisher shall be provided on all waste handling equipment.

(H) A hot load area shall be established to contain loads that arrive with hotspots or open flames.

(I) Any fires discovered in wastes delivered to the landfill shall be extinguished away from the working face, whenever possible.

(J) Any surface fire discovered at the working face or subsurface fire, oxidation, or smoldering event shall be extinguished immediately; the landfill owner/operator shall notify the department as soon as it has been discovered.

(20) Records.

(A) [Requirement.] The owner/operator of a *[sanitary]* landfill shall maintain records and monitoring data as specified by the department and file appropriate documents with the county recorder(s) of deeds.

[(B)]1. [Satisfactory Compliance—Design. Plans] The landfill owner/operator shall *[prescribe]* describe the methods *[to be used in]* for creating and maintaining records of operations and monitoring *[the environmental impact of]* at the *[sanitary]* landfill. *[Information on recording and monitoring requirements may be obtained from the department.]*

[(C) Satisfactory Compliance—Operations.]

[1.]2. Current *[R]*records shall be maintained at the landfill office. Records five (5) years old or older may be stored **electronically or off-site** at an alternate site if approved by the department; such *[stored]* records must be made available *[at]* to the *[landfill]* department upon request *[of department personnel. Records must cover at least the following:]*.

3. The landfill files may be maintained on electronic media and shall include the following records, at a minimum:

A. Copies of approved permit documents and current permits;

[A.]/B. Major operational problems, complaints, or difficulties; and **any corrective actions taken;**

[B.]/C. Gas monitoring results from monitoring and any *[remediation]* corrective action plans *[required under section (14) of this rule]* being implemented;

[C.]/D. Any demonstration, certification, finding, monitoring, testing, or analytical data *[required under sections (4) and (11) of this rule];*

[D.]/E. [Vector control] Housekeeping records to summarize efforts;

E. Dust] taken for vector, dust, odor, and litter control *[efforts];*

F. Quantitative measurements of the solid waste handled and an estimate of the air space left at the facility. *[Every two (2)]* By January 31st, on even numbered years *[after the date of the permit issuance and within sixty (60) days of the anniversary*

date of the permit issuance], the owner/operator shall submit to the department two (2) copies of a topographic map **prepared during the previous calendar year**, prepared under the direction of a land surveyor or by aerial photography, showing the current horizontal and vertical boundaries of solid waste in the *[sanitary]* landfill, the boundaries of the *[sanitary]* landfill. *Maps prepared*, and a **form provided** by *[aerial photography shall meet the current National Map Accuracy Standards for Photogrammetry as indicated]* the department listing airspace filled in *[United States Bureau of the Budget "Circular A-16 Exhibit C," dated October 10, 1958]* the preceding period;

G. Description, source, and volume of special wastes that are received;

H. Any *[sanitary]* landfill design documentation for recirculation of leachate or gas condensate in a landfill, **as applicable**;

I. Closure and post-closure care plans and any **associated** monitoring, testing, or analytical data *[as required under 10 CSR 80-2.030(4)(A)]*;

J. *[Any]* **Most recently approved** cost estimates and financial assurance documentation *[required under 10 CSR 80-2.030(4)(B) and (C)]*;

K. Inspection records and training procedures *[as required under 10 CSR 80-2.060 and subsection (3)(B) of this rule]*, **including screening for excluded wastes**;

L. Records associated with **tonnage** fees *[as required under 10 CSR 80-2.080(2)]*; and

[M. Records associated with corrective measures as required under section (10) of this rule; and]

[N.]M. [Effective January 1, 1998, o]On or before January 31 of each calendar year and annually thereafter each solid waste disposal area shall submit a report to the department specifying the amount of solid waste received for disposal from states other than Missouri. [The landfill operator shall keep a detailed report of the origin of all waste received.]

[2.](B) [Upon closing of the sanitary] Once a landfill[,] ceases accepting waste, the landfill owner shall record the existence of the [sanitary] landfill [shall be recorded] with the recorder(s) of deeds in the county(ies) where the [sanitary] landfill is located. The owner/[operator] may request permission from the department to remove the notation from the deed if all wastes are removed from the [facility] landfill.

[A.]1. After the landfill ceases accepting waste, the owner/operator shall obtain a land surveyor to prepare [A/a survey and plat meeting the requirements of the current Minimum Standards of Property Boundary Survey [10]2 CSR [30-2.010/90 and a detailed description of the [sanitary] landfill [shall be prepared by a land surveyor]. The survey plat and detailed description, at a minimum, shall contain the following information:

[(I)]A. The name of the property owner as it appears on the property deed;

[(III)]B. The detailed description of the property;

[(III)]C. The general types and location of the solid wastes and the depth(s) of fill within the property; [and]

[(V)]D. The location of any leachate [control] collection system, gas collection and control [or] system, and existing gas, surface water, groundwater monitoring system(s) which shall be maintained after closure and the length of time that these systems are to be maintained[.]; and

E. The permitted name and permit number(s) of the landfill.

[B.]2. The owner/[operator] shall—

A. Submit to and obtain approval from the department of the survey plat and detailed description *[prior to filing with the county recorder of deeds. After receiving approval from the department and before filing with the county recorder of deeds, the detailed description shall be];*

B. Have the approved plat notarized by a lawful notary public[.];

C. [Filing] File the [notarized] approved survey plat [or] and detailed description [shall be accomplished] with the county recorder(s) of deeds within thirty (30) days of departmental approval[.]; and

D. Submit to the department within thirty (30) days of the date of filing, *[T]two (2) copies of the notarized and properly recorded plat [or] and detailed description showing the recorder(s) of deeds' seal(s) or stamp(s), the book and page numbers, and the date of filing [shall be submitted to the department within thirty (30) days of the date of filing].*

[C. Owners of solid waste disposal areas permitted prior to January 1, 1987, and which close after January 1, 1989, as a part of closure of the solid waste disposal area shall—

[(I) Execute an easement with the department, which allows the department, its agents or its contractors to enter the premises to complete work specified in the closure plan, to monitor or maintain the solid waste disposal area or take remedial action during post-closure period; and

[(II) Submit evidence to the department that a notice and covenant running with the land has been recorded with the recorder of deeds in the county where the sanitary landfill is located. The notice and covenant shall specify the following:

(a) That the property has been permitted as a sanitary landfill; and

(b) That use of the land in any manner which interferes with closure plans, and post-closure plans filed with the department, is prohibited.]

(21) Bioreactor Permits and Bioreactor Permit Modifications for Sanitary Landfills.

(A) The department may issue a permit or a permit modification to allow an owner/operator to design, construct, and operate a sanitary landfill as a bioreactor (bioreactor permit), utilizing innovative and new designs and/or operations which vary from specific criteria listed in this rule, provided the landfill systems are designed and operated in a manner protective of human health and the environment.

(B) For a proposed bioreactor at a new sanitary landfill, the design plans shall address all elements of landfill design, construction, and operation outlined in this rule, with special consideration for the effects of increased moisture content of the waste mass.

(C) For a proposed bioreactor at an existing sanitary landfill, the design plans shall include an assessment of all previously approved aspects of design, construction, and operation. Sanitary landfill systems and components shall be redesigned, construction procedures shall be developed, and all operating, monitoring, and quality control plans shall be revised, as necessary, with special consideration for bioreactor operations and the effects of increased moisture content of the waste mass.

(D) In addition, each bioreactor permit application shall include—

1. An explanation of the objectives of the research, development, and demonstration project;

2. Detailed explanations of the methods and procedures that will be used to add liquids, if applicable;

3. Detailed water balance calculations;

4. Detailed construction QA/QC procedures for all liquids addition systems;

5. A detailed operating and maintenance plan prepared as an addendum to the landfill's operating manual which includes:

A. Operating procedures for all bioreactor systems and other systems whose operation could be affected by the increased moisture, including but not limited to:

(I) All liquids addition systems;

(II) Leachate management systems; and

(III) Landfill gas collection and control systems; and

B. A detailed plan for inspecting all landfill control and monitoring systems and maintaining accurate records of each inspection;

6. Provisions for leak testing of the geomembrane component of the composite liner system following installation; and

7. Facility designs that maintain a depth of leachate of less than one foot (1') on the landfill liner.

(22) Special Waste Landfills.

(A) Should an owner/operator request to permit a special waste landfill, the owner/operator shall include a list identifying what sections of this rule are and are not applicable to the landfill, as well as detailed discussion explaining how that determination was made. For special waste landfills in operation at the time of the effective date of this rule, the facility has until January 31, 2020, to submit a modification stating which parts of this rule are applicable and a detailed discussion explaining the rationale and for excluding certain requirements.

(B) The department may require any special waste landfill owner/operator to design, construct, operate, and maintain the landfill in accordance with any sanitary landfill requirement to ensure the protection of human health and the environment.

Appendix I—Constituents for Detection Monitoring for Sanitary Landfills

Indicator Constituents

Chemical Oxygen Demand (COD in milligrams per liter (mg/l));

Chlorides (Cl, (mg/l)) dissolved;

pH (units);

Specific Conductance (Conductivity at twenty-five degrees Celsius (25°C) in micromhos per centimeter (μmho/cm));

Total Dissolved Solids (TDS, (mg/l)); and

Inorganic Constituents

Ammonia (NH₃ as N, mg/l)

Antimony (Sb, μg/l)

Arsenic (As, μg/l)

Barium (Ba, μg/l)

Beryllium (Be, μg/l)

Boron (B, μg/l)

Cadmium (Cd, μg/l)

Calcium (Ca, mg/l)

Chromium (Cr, μg/l)

Cobalt (Co, μg/l)

Copper (Cu, μg/l)

Fluoride (F, mg/l)

Hardness (calculated, mg/l)

Lead (Pb, μg/l)

Magnesium (Mg, mg/l)

Manganese (Mn, μg/l)

[Mercury (Hg, μg/l)]

Nickel (Ni, mg/l)

Nitrate/Nitrite (NO₃/NO₂, mg/l)

Phosphorus (total P, mg/l)

Selenium (Se, μg/l)

Silver (Ag, μg/l)

Sodium (Na, mg/l)

Sulfate (SO₄, mg/l)

Thallium (Tl, μg/l)

Total Organic Carbon (TOC, mg/l)

Vanadium (V, μg/l)

Zinc (Zn, μg/l)

Organic Constituents

Acetone

Acrylonitrile

Benzene

Bromochloromethane

Bromodichloromethane

Bromoform; Tribromomethane

Carbon disulfide

Carbon tetrachloride

Chlorobenzene

Chloroethane; Ethyl chloride

Chloroform; Trichloromethane

Dibromochloromethane; Chlorodibromomethane

1,2-Dibromo-3-chloropropane; DBCP

1,2-Dibromoethane; Ethylene dibromide; EDB o-Dichlorobenzene;

1,2-Dichlorobenzene

p-Dichlorobenzene; 1,4-Dichlorobenzene trans-1,4-Dichloro-2-butene

1,1-Dichloroethane; Ethylidene chloride

1,2-Dichloroethane; Ethylene dichloride

1,1-Dichloroethylene; 1,1-Dichloroethene;

Vinylidene chloride

cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene

trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene

1,2-Dichloropropane; Propylene dichloride

cis-1,3-Dichloropropene

trans-1,3-Dichloropropene

Ethylbenzene

2-Hexanone; Methyl butyl ketone

Methyl bromide; Bromomethane

Methyl chloride; Chloromethane

Methylene bromide; Dibromomethane

Methylene chloride; Dichloromethane

Methyl ethyl ketone; MEK; 2-Butanone

Methyl iodide; Iodomethane

4-Methyl-2-pentanone; Methyl isobutyl ketone

Styrene

1,1,1,2-Tetrachloroethane

1,1,2,2-Tetrachloroethane

Tetrachloroethylene; Tetrachloroethene;

Perchloroethylene

Toluene

1,1,1-Trichloroethane; Methylchloroform

1,1,2-Trichloroethane

Trichloroethylene; Trichloroethene

Tichlorofluoromethane; CFC-11

1,2,3-Trichloropropane

Vinyl acetate

Vinyl chloride

Xylenes

Appendix II—List of Hazardous Inorganic and Organic Constituents¹ for Assessment Monitoring for Sanitary Landfills

Common Name ²	CAS RN ³
Acenaphthene	83-32-9
Acenaphthylene	208-96-8
Acetone	67-64-1
Acetonitrile; Methyl cyanide	75-05-8
Acetophenone	98-86-2
2-Acetylaminofluorene; 2-AAF	53-96-3
Acrolein	107-02-8
Acrylonitrile	107-13-1
Aldrin	309-00-2
Allyl chloride	107-05-1
4-Aminobipheny	192-67-1
Anthracene	120-12-7
Antimony	(Total)
Arsenic	(Total)
Barium	(Total)
Benzene	71-43-2
Benzo[a]anthracene; Benzanthracene	56-55-3

Benzo[b]fluoranthene	205-99-2	3,3'-Dichlorobenzidine	91-94-1
Benzo[k]fluoranthene	207-08-9	trans-1,4-Dichloro-2-butene	110-57-6
Benzo[ghi]perylene	191-24-2	Dichlorodifluoromethane; CFC 12;	75-71-8
Benzo[a]pylene	50-32-8	1,1-Dichloroethane; Ethyldidene	
Benzyl alcohol	100-51-6	chloride	75-34-3
Beryllium	(Total)	1,2-Dichloroethane; Ethylene	
alpha-BHC	319-84-6	dichloride	107-06-2
beta-BHC	319-85-7	1,1-Dichloroethylene;	
delta-BHC	319-86-8	1,1-Dichloroethene; Vinylidene	
gamma-BHC; Lindane	58-89-9	chloride	75-35-4
Bis(2-chloroethoxy)methane	111-91-1	cis-1,2-Dichloroethylene;	
Bis(2-chloroethyl) ether;	111-44-4	cis-1,2-Dichloroethene	156-59-2
Dichloroethyl ether		trans-1,2-Dichloroethylene	
Bis(2-chloro-1-methylethyl) ether;	108-60-1	trans-1,2-Dichloroethene	156-60-5
2,2'-Dichlorodiisopropyl ether;		2,4-Dichlorophenol	120-83-2
DCIP	See Note 3	2,6-Dichlorophenol	87-65-0
Bis(2-ethylhexyl) phthalate	117-81-7	1,2-Dichloropropane;	
Bromochloromethane;		Propylene dichloride	78-87-5
Chlorobromomethane	74-97-5	1,3-Dichloropropane;	
Bromodichloromethane;		Trimethylene dichloride	142-28-9
Dibromochloromethane	75-27-4	2,2-Dichloropropane;	
Bromoform; Tribromomethane	75-25-2	Isopropylidene chloride	594-20-7
4-Bromophenylphenyl ether	101-55-3	1,1-Dichloropropene	563-58-6
Butyl benzyl phthalate;		cis-1,3-Dichloropropene	10061-01-5
Benzyl butyl phthalate	85-68-7	trans-1,3-Dichloropropene	10061-02-6
Cadmium	(Total)	Dieldrin	60-57-1
Carbon disulfide	75-15-0	Diethyl phthalate	84-66-2
Carbon tetrachloride	56-23-5	O,O-Diethyl O-2-pyrazinyl	
Chlordane	See Note 4.	phosphorothioate; Thionazin	297-97-2
p-Chloroaniline	106-47-8	Dimethoate	60-51-5
Chlorobenzene	108-90-7	p-(Dimethylamino)azobenzen	60-11-7
Chlorobenzilate	510-15-6	7,12-Dimethylbenz[a]nthalene	57-97-6
p-Chloro-m-cresol;		3,3'-Dimethylbenzidine	119-93-7
4-Chloro-3-methylphenol	59-50-7	2,4-Dimethylphenol; m-Xylenol	105-67-9
Chloroethane; Ethyl chloride	75-00-3	Dimethyl phthalate	131-11-3
Chloroform; Trichloromethane	67-66-3	m-Dinitrobenzene	99-65-0
2-Chloronaphthalene	91-58-7	4,6-Dinitro-o-cresol	
2-Chlorophenol	95-57-8	4,6-Dinitro-2-methylphenol	534-52-1
4-Chlorophenyl phenyl ether	7005-72-3	2,4-Dinitrophenol;	51-28-5
Chloroprene	126-99-8	2,4-Dinitrotoluene	121-14-2
Chromium	(Total)	2,6-Dinitrotoluene	606-20-2
Chrysene	218-01-9	Dinoseb; DNBP;	
Cobalt	(Total)	2-sec-Butyl-4,6-dinitrophenol	88-85-7
Copper	(Total)	Di-n-octyl phthalate	117-84-0
m-Cresol; 3-methylphenol	108-39-4	Diphenylamine	122-39-4
o-Cresol; 2-methylphenol	95-48-7	Disulfoton	298-04-4
p-Cresol; 4-methylphenol	106-44-5	Endosulfan I	959-98-8
Cyanide	57-12-5	Endosulfan II	33213-65-9
2,4-D; 2,4-Dichlorophenoxyacetic		Endosulfan sulfate	1031-07-8
acid	94-75-7	Endrin	72-20-8
4,4'-DDD	72-54-8	Endrin aldehyde	7421-93-4
4,4'-DDE	72-55-9	Ethylbenzene	100-41-4
4,4'-DDT	50-29-3	Ethyl methacrylate	97-63-2
Diallate	2303-16-4	Ethyl methanesulfonate	62-50-0
Dibenz[a,h]anthracene	53-70-3	Famphur	52-85-7
Dibenzofuran	132-64-9	Fluoranthene	206-44-0
Dibromochloromethane;		Fluorene	86-73-79
Chlorodibromomethane	124-48-1	Heptachlor	76-44-8
1,2-Dibromo-		Heptachlor epoxide	1024-57-3
3-chloropropane;DBCP	96-12-8	Hexachlorobenzene .	118-74-1
1,2-Dibromoethane; Ethylene	106-93-4	Hexachlorobutadiene	87-68-3
dibromide; EDB		Hexachlorocyclopentadiene	77-47-4
Di-n-butyl phthalate	84-74-2	Hexachloroethane	67-72-1
o-Dichlorobenzene;		Hexachloropropene	1888-71-7
1,3-Dichlorobenzene	95-50-1	2-Hexanone; Methyl butyl ketone	591-78-6
m-Dichlorobenzene;		Indeno(1,2,3-cd)pyrene	193-39-5
1,3-Dichlorobenzene	541-73-1	Isobutyl alcohol	78-83-1
p-Dichlorobenzene;		Isodrin	465-73-6
1,4-Dichlorobenzene	106-46-7		

Isophorone	78-59-1
Isosafrole	120-58-1
Kepone	143-50-0
Lead	(Total)
Mercury	(Total)
Methacrylonitrile	126-98-7
Methapyrilene	91-80-5
Methoxychlor	72-43-5
Methyl bromide; Bromomethane	74-83-9
Methyl chloride; Chloromethane	74-87-3
3-Methylcholanthrene	56-49-5
Methyl ethyl ketone; MEK; 2-Butanone	78-93-3
Methyl iodide; Iodomethane	74-88-4
Methyl methacrylate	80-62-6
Methyl methanesulfonate	66-27-3
2-Methylnaphthalene	91-57-6
Methyl parathion; Parathion methyl	298-00-0
4-Methyl-2-pentanone;	
Methyl isobutyl ketone	108-10-1
Methylene bromide; Dibromomethane	74-95-3
Methylene chloride; Dichloromethane	75-09-2
Naphthalene	91-20-3
1,4-Naphthoquinone	130-15-4
1-Naphthylamine	134-32-7
2-Naphthylamine	91-59-8
Nickel	(Total)
o-Nitroaniline; 2-Nitroaniline	88-74-4
m-Nitroaniline; 3-Nitroaniline	99-09-2
p-Nitroaniline; 4-Nitroaniline	100-01-6
Nitrobenzene	98-95-3
o-Nitrophenol; 2-Nitrophenol	88-75-5
p-Nitrophenol; 4-Nitrophenol	100-02-7
N-Nitrosodi-n-butylamine	924-16-3
N-Nitrosodiethylamine	55-18-5
N-Nitrosodimethylamine	62-75-9
N-Nitrosodiphenylamine	86-30-6
N-Nitrosodipropylamine; N-nitroso-N-dipropylamine	
Di-n-propylnitrosamine	621-64-7
N-Nitrosomethylethylamine	10595-95-6
N-Nitrosopiperidine	100-75-4
N-Nitrosopyrrolidine	930-55-2
5-Nitro-o-toluidine	99-55-8
Parathion	56-38-2
Pentachlorobenzene	608-93-5
Pentachloronitrobenzene	82-68-8
Pentachlorophenol	87-86-5
Phenacetin	62-44-2
Phenanthrene	85-01-8
Phenol	108-95-2
p-Phenylenediamine	106-50-3
Phorate	298-02-2
Polychlorinated biphenyls; PCBs; Aroclors	See Note 5.
Pronamide	23950-58-5
Propionitrile; Ethyl cyanide	107-12-0
Pyrene	129-00-0
Safrole	94-59-7
Selenium	(Total)
Silver	(Total)
Silvex; 2,4,5-TP	93-72-1
Styrene	100-42-5
Sulfide	18496-25-8
2,4,5-T; 2,4,5-Trichlorophenoxyacetic acid	93-76-5

1,2,4,5-Tetrachlorobenzene	95-94-3
1,1,1,2-Tetrachloroethane	630-20-6
1,1,2,2-Tetrachloroethane	79-34-5
Tetrachloroethylene; Tetra- chloroethene; Perchloroethylene	127-18-4
2,3,4,6-Tetrachlorophenol	58-90-2
Thallium	(Total)
Tin	(Total)
Toluene	108-88-3
o-Toluidine	95-53-4
Toxaphene	See Note 6.
1,2,4-Trichlorobenzene	120-82-1
1,1,1-Trichloroethane; Methylchloroform	71-55-6
1,1,2-Trichloroethane	79-00-5
Trichloroethylene; Trichloroethene	79-01-6
Trichlorofluoromethane; CFC-11	75-69-4
2,4,5-Trichlorophenol	95-95-4
2,4,6-Trichlorophenol	88-06-2
1,2,3-Trichloropropane	96-18-4
0,0,0-Triethyl phosphorothioate	126-68-1
sym-Trinitrobenzene	99-35-4
Vanadium	(Total)
Vinyl acetate	108-05-4
Vinyl chloride; Chloroethene	75-01-4
Xylene (total)	See Note 7.
Zinc	(Total)

Appendix III—Constituents for Detection Monitoring for Demolition Landfills

Indicator Constituents

Aluminum (Al, $\mu\text{g/l}$)
Ammonia (NH_3 as N, mg/l)
Antimony (Sb, $\mu\text{g/l}$)
Arsenic (As, $\mu\text{g/l}$)
Barium (Ba, $\mu\text{g/l}$)
Beryllium (Be, mg/l)
Boron (B, $\mu\text{g/l}$)
Cadmium (Cd, $\mu\text{g/l}$)
Calcium (Ca, mg/l)
Chemical Oxygen Demand (COD, mg/l)
Chloride (Cl, mg/l)
Chromium (Cr, $\mu\text{g/l}$)
Cobalt (Co, $\mu\text{g/l}$)
Copper (Cu, $\mu\text{g/l}$)
Fluoride (F, $\mu\text{g/l}$)
Hardness (calculated, mg/l)
Iron (Fe, $\mu\text{g/l}$)
Lead (Pb, $\mu\text{g/l}$)
Magnesium (Mg, mg/l)
Manganese (Mn, $\mu\text{g/l}$)
Mercury (Hg, $\mu\text{g/l}$)
Nickel (Ni, mg/l)
pH (units)
Potassium (K, mg/l)
Selenium (Se, $\mu\text{g/l}$)
Silver (Ag, $\mu\text{g/l}$)
Sodium (Na, mg/l)
Specific Conductance (Conductivity at 25°C, mho/cm)
Sulfate (SO ₄ , mg/l)
Thallium (Tl, $\mu\text{g/l}$)
Total Dissolved Solids (TDS, mg/l)
Total Organic Carbon (TOC, mg/l)
Total Organic Halogens (TOX, mg/l)
Zinc (Zn, $\mu\text{g/l}$)

**Appendix IV—Constituents for Assessment Monitoring for
Demolition Landfills**

Inorganic Constituents

Nitrate/Nitrite (NO₃/NO₂, mg/l)

Phosphorus (total P, mg/l)

Vanadium (V, µg/l)

Zinc (Zn, µg/l)

Organic Constituents

Acetone

Acrylonitrile

Benzene

Bromochloromethane

Bromodichloromethane

Bromoform; Tribromomethane

Carbon disulfide

Carbon tetrachloride

Chlorobenzene

Chloroethane; Ethyl chloride

Chloroform; Trichloromethane

Dibromochloromethane; Chlorodibromomethane

1,2-Dibromo-3-chloropropane; DBCP

1,2-Dibromoethane; Ethylene dibromide;

EDB

o-Dichlorobenzene; 1,2-Dichlorobenzene

p-Dichlorobenzene; 1,4-Dichlorobenzene

trans-1,4-Dichloro-2-butene

1,1-Dichloroethane; Ethylidene chloride

1,2-Dichloroethane; Ethylene dichloride

1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride

cis-1,2-Dichloroethylene;

cis-1,2-Dichloroethene

trans-1,2-Dichloroethylene;

trans-1,2-Dichloroethene

1,2-Dichloropropane; Propylene dichloride

cis-1,3-Dichloropropene

trans-1,3-Dichloropropene

Ethylbenzene

2-Hexanone; Methyl butyl ketone

Methyl bromide; Bromomethane

Methyl chloride; Chloromethane

Methylene bromide; Dibromomethane

Methylene chloride; Dichloromethane

Methyl ethyl ketone; MEK; 2-Butanone

Methyl iodide; Iodomethane

4-Methyl-2-pentanone; Methyl isobutyl ketone

Styrene

1,1,1,2-Tetrachloroethane

1,1,2,2-Tetrachloroethane

Tetrachloroethylene; Tetrachloroethene; Perchloroethylene

Toluene

1,1,1-Trichloroethane; Methylchloroform

1,1,2-Trichloroethane

Trichloroethylene; Trichloroethene

Trichlorofluoromethane; CFC-11

1,2,3-Trichloropropane

Vinyl acetate

Vinyl chloride

Xylenes

Notes

1. The regulatory requirements pertain only to the list of substances.
2. Common names are those widely used in government regulations,

scientific publications, and commerce; synonym/s/ exist for many chemicals.

3. This substance is often called Bis(2-chloroisopropyl) ether, the name Chemical Abstracts Service applies to its noncommercial isomer, Propane, 2,2'-oxybis, 2-chloro- (CAS RN 39638-32-9).

4. Chlordane: This entry includes alpha-chlordane (CAS RN 5103-71-9), beta-chlordane (CAS RN 5103-74-2), gamma-chlordane (CAS RN 5566-34-7), and constituents of chlordane (CAS RN 57-74-9 and CAS RN 12789-03-6).

5. Polychlorinated biphenyls (CAS RN 1336-36-3); this category contains congener chemicals, including constituents of Aroclor 1016 (CAS RN 12674-11-2), Aroclor 1221 (CAS RN 11104-28-2), Aroclor 1232 (CAS RN 11141-16-5), Aroclor 1242 (CAS RN 53469-21-9), Aroclor 1248 (CAS RN 12672-29-6), Aroclor 1254 (CAS RN 11097-69-1), and Aroclor 1260 (CAS RN 11096-82-5).

6. Toxaphene: This entry includes congener chemicals contained in technical toxaphene (CAS RN 8001-35-2), i.e., chlorinated camphene.

7. Xylene (total): This entry includes o-xylene (CAS RN 96-47-6), m-xylene (CAS RN 108-38-3), p-xylene (CAS RN 106-42-3), and unspecified xylenes (dimethylbenzenes) (CAS RN 1330-20-7).

AUTHORITY: section 260.225, RSMo [Supp. 1997] 2016. Original rule filed Dec. 11, 1973, effective Dec. 21, 1973. For intervening history, please consult the Code of State Regulations. Amended: Filed June 29, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Missouri Department of Natural Resources, PO Box 176, Jefferson City, MO 65102-0176. To be considered, comments will be received until September 25, 2018. A public hearing date is scheduled for 1:00 pm September 18, 2018, at the LaCharrette Conference Room, 1101 Riverside Drive, Jefferson City, Missouri.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 80—Solid Waste Management
Chapter 4—Demolition Landfill**

PROPOSED RESCISSION

10 CSR 80-4.010 Design and Operation. This rule regulated the design and operation of Demolition (construction waste) Landfills. This rule specifically addressed the siting, groundwater monitoring, liner and cover design, seismic design, and the design and operation of leachate collection systems and methane recovery systems.

PURPOSE: The Solid Waste Management Program is proposing to combine 10 CSR 80-3.010 Sanitary Landfill and 10 CSR 80-4.010 Demolition Landfill. The rulemaking for rescinding 10 CSR 80-4.010 will need to run concurrently with the rulemaking amendment to 10 CSR 80-3.010 to ensure there is not a regulatory conflict. The Solid Waste Management Program believes that the consolidation of 10 CSR 80-3.010 and 10 CSR 4.010 will not significantly affect the ability to protect human health and the environment. The evidence supporting

the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Solid Waste Management Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Proposed Rules website www.dnr.mo.gov/proposed-rules.

AUTHORITY: *section 260.225, RSMo Supp. 1997. Original rule filed Dec. 11, 1973, effective Dec. 21, 1973. For intervening history, please consult the Code of State Regulations. Rescinded: Filed June 29, 2018.*

PUBLIC COST: *This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.*

PRIVATE COST: *This proposed rescission will not cost private entities more than five hundred dollars (\$500) in the aggregate.*

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: *Anyone may file a statement in support of or in opposition to this proposed recession with the Missouri Department of Natural Resources, PO Box 176, Jefferson City, MO 65102-0176. To be considered, comments will be received until September 25, 2018. A public hearing date is scheduled for 1:00 pm September 18, 2018, at the LaCharrette Conference Room, 1101 Riverside Drive, Jefferson City, Missouri.*

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 130—State Environmental Improvement and
Energy Resources Authority
Chapter 1—Applications**

PROPOSED AMENDMENT

10 CSR 130-1.010 Definitions. The State Environmental Improvement and Energy Resources Authority is amending sections (1) through (4), (6), (10), (13), (20), and (24); deleting sections (5), (7), (8), (9), (11), (12), (14) through (19), (22), and (23); and renumbering sections (6), (10), (13), (20), (21), and (24). Proposed amendments will reference state statutes in section (1); delete language that is duplicative with state statutes in sections (5), (7), (8), (9), (11), (12), (14) through (19), (22), and (23); and delete restrictive words in sections (1) through (4), (6), (10), (13), (20), and (24).

PURPOSE: *This rule is being amended because it has not been amended since 1986 and contains definitions duplicative with state statute. The proposed amendments to 10 CSR 130-1.010 were identified during the Red Tape Reduction review pursuant to Executive Order 17-03.*

(1) Except where the context indicates otherwise, *[the following]* terms as used in these rules *[shall]* have the meaning ascribed to them in this rule **or the Act**.

(2) Act *[shall]* means sections 260.005 to 260.125, inclusive, *[Revised Statutes of Missouri]* **RSMo** and Appendix B(1) thereto.

(3) Air pollution *[shall]* means the presence in the ambient air of one (1) or more air contaminants in quantities, of characteristics and a duration which directly and proximately cause or contribute to injury to human, plant, or animal life or health or to property or which unreasonably interferes with the enjoyment of life or use of property.

(4) Application fee *[shall]* means the fee payable upon filing of an application.

[(15) Authority shall mean the State Environmental Improvement and Energy Resources Authority created by the Act.]

[(6)](5) Authorized representative [shall] means with respect to a corporation that person designated to act on its behalf by written certificate of authority furnished to the authority containing the specimen signature of the person and signed on behalf of the corporation by its president or any vice president and attested to by its secretary or an assistant secretary.

[(17) Bonds shall mean bonds issued by the authority pursuant to the provisions of the Act.]

(8) Cost shall mean the expense of the acquisition of land, rights of way, easements and other interests in real property and the expense of acquiring or construction of buildings, improvements, machinery and equipment relating to any project, including the cost of demolishing or removing any existing structures, interest during the construction of any project and engineering research, legal, accounting, underwriting, consulting and other expenses necessary or incident to determining the feasibility or practicability of any project and in carrying out the same, all of which are to be paid out of the proceeds of the loans, bonds or notes authorized by the Act.

(9) Disposal of solid waste or sewage shall mean the entire process of storage, collection, transportation, processing and disposal of solid waste or sewage.]

[(10)](6) Loans [shall] means loans made by the authority pursuant to the provisions of the Act.

[(11) Notes shall mean notes issued by the authority pursuant to the provisions of the Act.]

(12) Pollution shall mean the placing of any noxious substance in the air or waters or on the lands of the state in sufficient quantity and of amounts, characteristics and duration so as to injure or harm the public health or welfare or animal life or property.]

[(13)](7) Pollution control facility [shall] means any facility, including land, disposal areas, incinerators, buildings, fixtures, machinery, and equipment financed, acquired, or constructed or to be financed, acquired, or constructed by the authority for the purpose of preventing or reducing pollution or providing for the disposal of solid waste or sewage.

[(14) Project shall mean any facility, including land, disposal areas, incinerators, buildings, fixtures, machinery and equipment financed, acquired or constructed or to be financed, acquired or constructed by the authority for the purpose of developing energy resources or preventing or reducing pollution or the disposal of solid waste or sewage or providing water facilities or resource recovery facilities.]

(15) Resource recovery shall mean the recovery of material or energy from solid waste.

(16) Resource recovery facility shall mean any facility at which solid waste is processed for the purpose of extracting, converting to energy or otherwise separating and preparing solid waste for reuse.

(17) Resource recovery system shall mean a solid waste management system which provides for collection, separation,

recycling and recovery of solid wastes, including disposal of nonrecoverable waste residues.

(18) Sewage shall mean any liquid or gaseous waste resulting from industrial, commercial, agricultural or community activities in amounts, characteristics and duration so as to injure or harm the public health or welfare or animal life or property.

(19) Solid waste shall mean garbage, refuse, discarded materials and undesirable solid and semi-solid residual matter resulting from industrial, commercial, agricultural or community activities in amounts, characteristics and duration so as to injure or harm the public health or welfare or animal life or property.]

[(20)](8) Solid waste or sewage disposal area [shall] means any area used for the disposal of solid waste or sewage from more than one (1) residential premises or one (1) or more commercial, industrial, manufacturing, recreational, or governmental operations.

[(21)](9) Solid waste or sewage processing facility means incinerator, compost plant, transfer station, or any facility where solid wastes or sewage are salvaged.

[(22) Synthetic fuels shall mean any solid, liquid or gas or combination thereof, which can be used as a substitute for petroleum or natural gas (or any derivatives thereof, including chemical feedstocks) and which is produced by chemical or physical transformation (other than washing, coking or desulfurizing) of domestic sources of coal, including lignite and peat, shale, tar, sands, including heavy oils, water as a source of hydrogen only through electrolysis and mixtures of coal and combustible liquids including petroleum.

(23) Water facilities shall mean any facilities for the furnishing of water for industrial, commercial, agricultural or community purposes including, but not limited to, wells, reservoirs, dams, pumping stations, water lines, sewer lines, treatment plants, stabilization ponds, storm sewers, related equipment and machinery.]

[(24)](10) Water pollution [shall] means contamination or other alteration of the physical, chemical or biological properties, of any waters of the state, including change in temperature, taste, color, turbidity or odor of the waters or the discharge of any liquid, gaseous, solid, radioactive or other substance into any waters of the state as will or is reasonably certain to create a nuisance or render the waters harmful, detrimental or injurious to public health, safety, or welfare or to domestic, industrial, agricultural, recreational, or other legitimate beneficial uses or to wild animals, birds, fish, or other aquatic life.

AUTHORITY: section 260.035.1(23), RSMo [1986] 2016. Original rule filed Sept. 3, 1986, effective Nov. 28, 1986. Amended: Filed July 2, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the State Environmental Improvement and Energy Resources Authority, PO Box 744, Jefferson City, MO 65102. To be considered, comments

must be received within thirty (30) days after publication of this notice in the Missouri Register. No public hearing is scheduled.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 130—State Environmental Improvement and
Energy Resources Authority
Chapter 1—Applications**

PROPOSED AMENDMENT

10 CSR 130-1.020 Application Forms and Fees. The State Environmental Improvement and Energy Resources Authority is amending section (7), subsections (9)(A) and (B), (11)(A) through (C), sections (12) and (13); deleting sections (2) through (6), (10), subsection (11)(E) and section (15); adding new sections (2) and (3); and renumbering sections (7), (8), (9), and (11) through (14). Proposed amendments will delete duplicative language in section (2); delete or update obsolete language in sections (3), (4), (7), and subsection (11)(A); delete unnecessary requirements in sections (5), (6), subsections (9)(A) and (B), section (10), and subsection (11)(E); and delete restrictive language in subsections (11)(B) and (C), sections (12) and (13).

PURPOSE: This rule is being amended because it has not been revised since 1986 and is not current with authority policy. The proposed amendments to 10 CSR 130-1.020 were identified during the Red Tape Reduction review pursuant to Executive Order 17-03.

[(2) An application to acquire, construct or finance a project shall consist of the following: the application statement; proposed resolution of official action toward issuance of the authority's bonds and/or notes or the granting of a loan; and the application fee.

(3) Any private person, firm, corporation, public body, political subdivision or municipal corporation is eligible to submit an application with the authority requesting funding for a study or research proposal or a contract for services.

(4) An application to fund a study or research proposal or to enter into a contract to provide services shall consist of the following: the application statement and the application fee.

(5) The application shall be submitted to the authority at least five (5) days prior to any meeting of the authority at which the applicant has requested an appearance.

(6) The completed original application together with five (5) copies shall be filed with the State Environmental Improvement and Energy Resources Authority at its office in Jefferson City and an additional copy of the application shall be delivered, either in person or by mail to the authority's general counsel, or to another person and/or address as the authority may from time-to-time designate by resolution.]

(2) The completed application shall be delivered to the State Environmental Improvement and Energy Resources Authority at its office in Jefferson City and an additional copy delivered to the authority's general counsel, or to another person or address as the authority may from time-to-time designate by resolution.

(3) Applications may be delivered in paper or a computer readable format which may be accessed, read, electronically stored and printed by the authority.

[(7)](4) The application statement should present a detailed outline of the project [or the study or research proposal or the services to be rendered] for which the authority financing is requested and

should be in a form as the authority may from time-to-time require. A copy of the application form may be obtained from the authority at its office in Jefferson City.

[(8)](5) The authority may request additional information from the applicant and additional information so requested must be satisfactory to the authority before it passes its resolution of official action.

[(9)](6) If the project for which the authority is requested to finance is a pollution control project, the applicant, prior to the issuance of the authority's bonds and/or notes or the granting of the loan, shall file with the authority—

(A) A control agency certificate issued by the state or federal agency which is charged with regulating the pollution which the project is designed to control, reduce, or prevent *[in a form so as shall be determined by the authority from time-to-time]* stating that the pollution control project, as designed, is in furtherance of applicable state or federal standards and regulations; or

(B) An engineering certificate from an engineering firm *[acceptable to the authority in a form so as shall be determined by the authority from time-to-time]* stating that the pollution control project, as designed, is in furtherance of applicable state or federal standards and regulations. The applicant shall be responsible for applying to the appropriate state or federal agency or engineering firm for the control agency certificate and for submitting to the state or federal agency or engineering firm information as the state or federal agency or engineering firm may require.

[(10)] As a part of the application, the applicant shall prepare and submit a proposed resolution of official action.]

[(11)](7) The following fees are payable by applicant to the authority:

(A) Application Fee. An application fee in an amount as hereinafter provided is due and payable upon filing of the request for financing or refinancing. The application fee is an amount equal to one-tenth (1/10) of one percent (1%) of the amount for which financing is requested *[or of the total cost of the study or research proposal or contract to provide services.]* Notwithstanding the foregoing, the applicant fee shall not be less than one hundred dollars (\$100) nor more *[that] than* two thousand five hundred dollars (\$2,500). The application fee is nonrefundable and is in addition to the issuance fee or refinancing fee *[provided for that follows. Payment of the application fee shall be by bank draft, money order or check made payable to the State Environmental Improvement and Energy Resources Authority];*

(B) Issuance Fee. For all loans, bonds, or notes issued by the authority, other than loans, bonds, or notes which are being issued to refund or refinance loans, bonds, or notes previously issued by the authority, an issuance fee shall be payable to the authority at the time of the closing of the issuance of the bonds or notes or the granting of the loan *[which shall be]* and computed in the following manner:

Rate	Amount of Financing
.00625 (5/8 of 1%) on the 1st	\$ 2,500,000;
.005 (1/2 of 1%) on the next	\$ 2,500,000;
.00375 (3/8 of 1%) on the next	\$ 5,000,000;
.0025 (1/4 of 1%) on the next	\$15,000,000;
.00125 (1/8 of 1%) on all over	\$25,000,000;

(C) Refinancing Fee. On all loans, bonds or notes issued for refinancing or refunding previously issued loans, bonds, or notes, a refinancing fee shall be payable to the authority at the time of the closing of the issuance of the bonds or notes or the granting of the loan which *[shall be]* is calculated as follows: i) within two (2) years after the issuance of the loan, bonds or notes being refinanced, one-tenth (1/10) of the issuance fee provided in subsection (11)(B); ii) after two (2) years and within five (5) years after the issuance of the loan,

bonds or notes being refinanced, one-fifth (1/5) of the issuance fee provided in subsection (11)(B); iii) after five (5) years and within ten (10) years after the issuance of the loan, bonds or notes being refinanced, one-third (1/3) of the issuance fee provided in subsection (11)(B); iv) after ten (10) years and within fifteen (15) years after the issuance of the loan, bonds or notes being refinanced, one-half (1/2) of the issuance fee provided in subsection (11)(B); or v) after fifteen (15) years, same as issuance fee provided in subsection (11)(B); but in no event shall the refinancing fee be less than the lesser of a) ten thousand dollars (\$10,000) or b) the issuance fee provided in subsection (11)(B);

(D) Nature of Fees. The application fee, issuance fee, and refinancing fee are for the support of the authority and its activities. The application fee, issuance fee, and refinancing fee do not provide for bond registration and/or any other issuance or project costs, including, though not by way of limitation, attorneys' fees, printing costs, financial advisor fees, underwriting fees, or trustee fees;

[(E) Partial Prepayment of Issuance Fee or Refinancing Fee. Upon adoption of the resolution of official action toward issuance of the authority's bonds and/or notes or approval of the loan by the authority, the authority may require an applicant to make partial prepayment of the issuance fee or refinancing fee. The partial prepayment shall not exceed twenty-five percent (25%) of the total issuance fee or refinancing fee, as provided for in subsections (11)(B) or (C).]

[(12)](8) Each applicant *[shall]* may be required to personally appear at the meeting at which the authority considers the proposed resolution of official action.

[(13)](9) Prior to the issuance of the bonds and/or notes of the authority, the applicant shall either provide the authority with an unqualified opinion of counsel experienced in matters relating to tax exemption of interest on bonds and/or notes of states and their political subdivisions to the effect that the interest payments on the bonds and/or notes to be issued by the authority will be exempt from federal income taxes or *[shall]* apply for, and obtain in the name of the authority, a determination by the Internal Revenue Service that the interest payments on the bonds and/or notes to be issued by the authority will be exempt from federal income taxes.

[(14)](10) Upon written request submitted to the authority and upon good cause shown, the authority may waive or modify the strict application of any rule provided for in this rule including the payment of the application fee, issuance fee and refinancing fee, or the amount thereof, if the authority determines that the substance and purpose of any rule provided for in these regulations has been complied with and fulfilled.

[(15)] After the issuance of the resolution of official action toward issuance of the authority's bonds and/or notes, and no later than one (1) month prior to the issuance of the bonds or notes, a timetable for all future proceedings, following adoption of the resolution of official action toward issuance of the authority's bonds and/or notes shall be agreed upon between the authority and the applicant. All proceedings thereafter shall be governed by an agreed upon time schedule.]

AUTHORITY: section 260.035.1(23), RSMo [1986] 2016. Original rule filed Sept. 3, 1986, effective Nov. 28, 1986. Amended: Filed July 2, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the State Environmental Improvement and Energy Resources Authority, PO Box 744, Jefferson City, MO 65102. To be considered, comments must be received within thirty (30) days after publication of this notice in the Missouri Register. No public hearing is scheduled.

**Title 13—DEPARTMENT OF SOCIAL SERVICES
Division 70—MO HealthNet Division
Chapter 15—Hospital Program**

PROPOSED AMENDMENT

13 CSR 70-15.010 Inpatient Hospital Services Reimbursement Plan; Outpatient Hospital Services Reimbursement Methodology. The division is amending subsections (3)(B) and (15)(B).

PURPOSE: This amendment provides for the State Fiscal Year (SFY) 2019 trend factor to be applied in determining Federal Reimbursement Allowance (FRA) funded hospital payments for SFY 2019 along with updates to the calculation of the SFY 2019 Direct Medicaid payments.

(3) Per Diem Reimbursement Rate Computation. Each hospital shall receive a MO HealthNet per diem rate based on the following computation:

(B) Trend Indices (TI). Trend indices are determined based on the four- (4-) quarter average DRI Index for DRI-Type Hospital Market Basket as published in *Health Care Costs* by DRI/McGraw-Hill for each State Fiscal Year (SFY) 1995 to 1998. Trend indices starting in SFY 1999 will be determined based on CPI Hospital index as published in *Health Care Costs* by DRI/McGraw-Hill, or equivalent publication, regardless of any changes in the name of the publication or publisher, for each State Fiscal Year (SFY). Trend indices starting in SFY 2016 will be determined based on the Hospital Market Basket index as published in *Healthcare Cost Review* by Institute of Health Systems (IHS), or equivalent publication, regardless of any changes in the name of the publication or publisher, for each State Fiscal Year (SFY).

1. The TI are—

- A. SFY 1994—4.6%
- B. SFY 1995—4.45%
- C. SFY 1996—4.575%
- D. SFY 1997—4.05%
- E. SFY 1998—3.1%
- F. SFY 1999—3.8%
- G. SFY 2000—4.0%
- H. SFY 2001—4.6%
- I. SFY 2002—4.8%
- J. SFY 2003—5.0%
- K. SFY 2004—6.2%
- L. SFY 2005—6.7%
- M. SFY 2006—5.7%
- N. SFY 2007—5.9%
- O. SFY 2008—5.5%
- P. SFY 2009—5.5%
- Q. SFY 2010—3.9%
- R. SFY 2011—3.2%—The 3.2% trend shall not be applied in

determining the per diem rate, Direct Medicaid payments, or uninsured payments.

- S. SFY 2012—4.0%
- T. SFY 2013—4.4%
- U. SFY 2014—3.7%
- V. SFY 2015—4.3%

- W. SFY 2016—2.5%
- X. SFY 2017—2.7%
- Y. SFY 2018—3.2%
- Z. SFY 2019—2.8%

2. The TI for SFY 1996 through SFY 1998 are applied as a full percentage to the OC of the per diem rate and for SFY 1999 the OC of the June 30, 1998, rate shall be trended by 1.2% and for SFY 2000 the OC of the June 30, 1999, rate shall be trended by 2.4%. The OC of the June 30, 2000, rate shall be trended by 1.95% for SFY 2001.

3. The per diem rate shall be reduced as necessary to avoid any negative Direct Medicaid payments computed in accordance with subsection (15)(B).

4. A facility previously enrolled for participation in the MO HealthNet Program, which either voluntarily or involuntarily terminates its participation in the MO HealthNet Program and which reenters the MO HealthNet Program, will receive the same inpatient rate and outpatient rate as the previous owner/operator. Such facility will also receive the same Direct Medicaid Add-On Payment and Uninsured Add-On Payment as the previous owner/operator if the facility reenters the MO HealthNet Program during the same state fiscal year. If the facility does not reenter during the same state fiscal year, the Direct Medicaid Add-On Payment and Uninsured Add-On Payment will be determined based on the applicable base year data (i.e., fourth prior year cost report for the Direct Medicaid Payment; see 13 CSR 70-15.220 for the applicable data for the Uninsured Add-On Payment). If the facility does not have the applicable base year data, the Direct Medicaid Add-On Payment and the Uninsured Add-On Payment will be based on the most recent audited data available and will include annual trend factor adjustments from the year subsequent to the cost report period through the state fiscal year for which the payments are being determined.

(15) Direct Medicaid Payments.

(B) Direct Medicaid payment will be computed as follows:

1. The MO HealthNet share of the inpatient FRA assessment will be calculated by dividing the hospital's inpatient Medicaid patient days by the total inpatient hospital patient days from the hospital's base cost report to arrive at the inpatient Medicaid utilization percentage. This percentage is then multiplied by the inpatient FRA assessment for the current SFY to arrive at the increased allowable MO HealthNet costs for the inpatient FRA assessment. The MO HealthNet share of the outpatient FRA assessment will be calculated by dividing the hospital's outpatient MO HealthNet charges by the total outpatient hospital charges from the base cost report to arrive at the MO HealthNet utilization percentage. This percentage is then multiplied by the outpatient FRA assessment for the current SFY to arrive at the increased allowable MO HealthNet costs for the outpatient FRA assessment.

A. Effective for payments made on or after May 1, 2017, only the Fee-for-Service and Out-of-State components of the MO HealthNet share of both the inpatient and outpatient FRA assessment will be included in the Direct Medicaid add-on payment.

2. The unreimbursed MO HealthNet costs are determined by subtracting the hospital's per diem rate from its trended per diem costs. The difference is multiplied by the estimated MO HealthNet patient days for the current SFY plus the out-of-state days from the fourth prior year cost report trended to the current SFY. The estimated MO HealthNet patient days for the current SFY shall be the better of the sum of the Fee-for-Service (FFS) days plus managed care days or the days used in the prior SFY's Direct Medicaid payment calculation. The FFS days are determined from a regression analysis of the hospital's FFS days from February 1999 through December of the second prior SFY. The managed care days are based on the FFS days determined from the regression analysis, as follows: The FFS days are factored up by the percentage of FFS days to the total of FFS days plus managed care days from the hospital's fourth prior year cost report. The difference between the FFS days and the FFS days

factored up by the FFS days' percentage are the managed care days.

A. Effective January 1, 2010, the estimated MO HealthNet patient days shall be the better of the sum of the FFS days plus managed care days or the days used in the prior SFY's Direct Medicaid payment calculation (i.e., for SFY 2010, prior SFY would be SFY 2009) adjusted downward by twenty-five percent (25%) of the difference between the sum of the FFS days plus managed care days and the days used in the prior SFY's Direct Medicaid payment calculation.

(I) The FFS days plus managed care days are determined as follows: The FFS days are determined by applying a trend to the second prior Calendar Year (CY) days (i.e., for SFY 2010, second prior CY would be 2008) as determined from the state's Medicaid Management Information System (MMIS). The trend is determined from a regression analysis of the hospital's FFS days from February 1999 through December of the second prior CY. The managed care days are based on the FFS days determined from the regression analysis, as follows: The FFS days are factored up by the percentage of FFS days to the total of FFS days plus managed care days from the hospital's fourth prior year cost report. The difference between the FFS days and the FFS days factored up by the FFS days' percentage are the managed care days.

(II) The days used in the prior SFY's Direct Medicaid payment calculation adjusted downward by twenty-five percent (25%) are determined as follows: The days used in the prior SFY's Direct Medicaid payment calculation are compared to the sum of the FFS days plus managed care days as determined in part (15)(B)2.A.(I). If the hospital has greater estimated days as used in the prior SFY's Direct Medicaid payment calculation than the sum of the FFS days plus managed care days as determined in part (15)(B)2.A.(I), the difference between the days is multiplied by twenty-five percent (25%), and this amount is removed from the estimated days used in the prior SFY's Direct Medicaid payment calculation to arrive at the current year's estimated days.

B. Effective July 1, 2010, the estimated MO HealthNet patient days shall be the better of the sum of the FFS days plus managed care days or the days used in the SFY 2009 Direct Medicaid payment calculation adjusted downward by fifty percent (50%) of the difference between the sum of the FFS days plus managed care days and the days used in the SFY 2009 Direct Medicaid payment calculation.

(I) The FFS days plus managed care days are determined as set forth in part (15)(B)2.A.(I).

(II) The days used in the prior SFY's Direct Medicaid payment calculation adjusted downward by fifty percent (50%) are determined as follows: The days used in the prior SFY's Direct Medicaid payment calculation are compared to the sum of the FFS days plus managed care days as determined in part (15)(B)2.A.(I). If the hospital has greater estimated days as used in the prior SFY's Direct Medicaid payment calculation than the sum of the FFS days plus managed care days as determined in part (15)(B)2.A.(I), the difference between the days is multiplied by fifty percent (50%) and this amount is removed from the estimated days used in the prior SFY's Direct Medicaid payment calculation to arrive at the current year's estimated days.

C. Effective July 1, 2011, the estimated MO HealthNet patient days shall be the better of the sum of the FFS days plus managed care days or the days used in the SFY 2009 Direct Medicaid payment calculation adjusted downward by seventy-five percent (75%) of the difference between the sum of the FFS days plus managed care days and the days used in the SFY 2009 Direct Medicaid payment calculation.

(I) The FFS days plus managed care days are determined as set forth in part (15)(B)2.A.(I).

(II) The days used in the prior SFY's Direct Medicaid payment calculation adjusted downward by seventy-five percent (75%) are determined as follows: The days used in the prior SFY's Direct Medicaid payment calculation are compared to the sum of the FFS

days plus managed care days as determined in part (15)(B)2.A.(I). If the hospital has greater estimated days as used in the prior SFY's Direct Medicaid payment calculation than the sum of the FFS days plus managed care days as determined in part (15)(B)2.A.(I), the difference between the days is multiplied by seventy-five percent (75%) and this amount is removed from the estimated days used in the prior SFY's Direct Medicaid payment calculation to arrive at the current year's estimated days.

D. Effective July 1, 2012, the estimated MO HealthNet patient days shall be the sum of the FFS days plus managed care days. The FFS days plus managed care days are determined as set forth in part (15)(B)2.A.(I).

E. Effective for payments made on or after May 1, 2017, the estimated MO HealthNet patient days for the SFY shall be determined by adjusting the FFS days from the state's MMIS for the second prior Calendar Year (CY) (i.e., for SFY 2017, second prior CY would be 2015) by:

(I) The trend determined from a regression analysis of the hospital's FFS days from February 1999 through December of the second prior CY; and

(II) The days estimated to shift from FFS to managed care effective May 1, 2017. The estimated managed care days for populations added to managed care beginning May 1, 2017 will be subtracted from the trended FFS days to yield the estimated MO HealthNet patient days.

F. Effective for payments made on or after July 1, 2018, the estimated MO HealthNet patient days for the SFY shall be determined by adjusting the FFS days from the state's MMIS for the second prior Calendar Year (CY) (i.e., for SFY 2019, second prior CY would be 2017) by:

(I) The trend determined from a regression analysis of the hospital's FFS days from February 1999 through December of the second prior CY;

(II) A percentage adjustment shall be applied to the regression due to statewide managed care;

(III) The FFS days are factored up by the percentage of FFS days to the total of FFS days plus managed care days from the hospital's fourth prior year cost report to yield the estimated MO HealthNet patient days; and

(IV) From the total estimated MO HealthNet patient days, remove the SFY 2019 estimated managed care days to yield the estimated MO HealthNet FFS patient days.

/F./G. The trended cost per day is calculated by trending the base year costs per day by the trend indices listed in paragraph (3)(B)1., using the rate calculation in subsection (3)(A). In addition to the trend indices applied to inflate base period costs to the current fiscal year, base year costs will be further adjusted by a Missouri Specific Trend. The Missouri Specific Trend will be used to address the fact that costs for Missouri inpatient care of MO HealthNet residents have historically exceeded the compounded inflation rates estimated using national hospital indices for a significant number of hospitals. The Missouri Specific Trend will be applied at one and one-half percent (1.5%) per year to the hospital's base year. For example, hospitals with a 1998 base year will receive an additional six percent (6%) trend, and hospitals with a 1999 base year will receive an additional four and one-half percent (4.5%) trend.

(I) Effective for dates of service beginning July 1, 2010, the Missouri Specific Trend shall no longer be applied to inflate base period costs.

/G./H. For hospitals that meet the requirements in paragraphs (6)(A)1., (6)(A)2., and (6)(A)4. of this rule (safety net hospitals), the base year cost report may be from the third prior year, the fourth prior year, or the fifth prior year. For hospitals that meet the requirements in paragraphs (6)(A)1. and (6)(A)3. of this rule (first tier Disproportionate Share Hospitals), the base year operating costs may be the third or fourth prior year cost report. The MO HealthNet Division shall exercise its sole discretion as to which report is most representative of costs. For all other hospitals, the base

year operating costs are based on the fourth prior year cost report. For any hospital that has both a twelve- (12-) month cost report and a partial year cost report, its base period cost report for that year will be the twelve- (12-) month cost report.

[H.]. The trended cost per day does not include the costs associated with the FRA assessment, the application of minimum utilization, the utilization adjustment, and the poison control costs computed in paragraphs (15)(B)1., 3., 4., and 5.;

3. The minimum utilization costs for capital and medical education is calculated by determining the difference in the hospital's cost per day when applying the minimum utilization, as identified in paragraph (5)(C)4., and without applying the minimum utilization. The difference in the cost per day is multiplied by the estimated MO HealthNet patient days for the SFY;

4. The utilization adjustment cost is determined by estimating the number of MO HealthNet inpatient days the hospital will not provide as a result of the managed care health plans limiting inpatient hospital services. These days are multiplied by the hospital's cost per day to determine the total cost associated with these days. This cost is divided by the remaining total patient days from its base period cost report to arrive at the increased cost per day. This increased cost per day is multiplied by the estimated MO HealthNet days for the current SFY to arrive at the MO HealthNet utilization adjustment.

A. Effective January 1, 2010, hospitals other than safety net hospitals as defined in subsection (6)(B) will receive sixty-seven percent (67%) of the utilization adjustment calculated in accordance with paragraph (15)(B)4. Safety net hospitals will continue to receive one hundred percent (100%) of the adjustment calculated in accordance with paragraph (15)(B)4.

B. Effective July 1, 2010, hospitals other than safety net hospitals as defined in subsection (6)(B), children's hospitals as defined in subsection (2)(S), and specialty pediatric hospitals as defined in subsection (2)(P) will receive thirty-four percent (34%) of the utilization adjustment calculated in accordance with paragraph (15)(B)4. Children's hospitals and specialty pediatric hospitals will receive fifty percent (50%) of the adjustment calculated in accordance with paragraph (15)(B)4. Safety net hospitals will continue to receive one hundred percent (100%) of the adjustment calculated in accordance with paragraph (15)(B)4.

C. Effective July 1, 2011, the utilization adjustment will no longer apply to any hospital other than safety net hospitals as defined in subsection (6)(B), children's hospitals as defined in subsection (2)(S), and specialty pediatric hospitals as defined in subsection (2)(P). Children's hospitals and specialty pediatric hospitals will continue to receive fifty percent (50%) of the adjustment calculated in accordance with paragraph (15)(B)4. Safety net hospitals will continue to receive one hundred percent (100%) of the adjustment calculated in accordance with paragraph (15)(B)4.;

5. The poison control cost shall reimburse the hospital for the prorated MO HealthNet managed care cost. It will be calculated by multiplying the estimated MO HealthNet share of the poison control costs by the percentage of managed care participants to total MO HealthNet participants; and

6. Prior to July 1, 2006, the costs for including out-of-state Medicaid days is calculated by subtracting the hospital's per diem rate from its trended per diem cost and multiplying this difference by the out-of-state Medicaid days from the base year cost report. Effective July 1, 2006, the costs for including out-of-state Medicaid days is calculated by subtracting the hospital's per diem rate from its trended per diem cost and multiplying this difference by the out-of-state Medicaid days as determined from the regression analysis performed using the out-of-state days from the fourth, fifth, and sixth prior year cost reports.

Regulations. *Emergency amendment filed June 21, 2018, effective July 1, 2018, expires Feb. 28, 2019. Amended: Filed June 21, 2018.*

PUBLIC COST: *This proposed amendment will cost state agencies or political subdivisions approximately \$13.6 million dollars.*

PRIVATE COST: *This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.*

NOTICE TO SUBMIT COMMENTS: *Anyone may file a statement in support of or in opposition to this proposed amendment with the Department of Social Services, Legal Services Division-Rulemaking, PO Box 1527, Jefferson City, MO 65102-1527, or by email to Rules.Comment@dss.mo.gov. To be considered, comments must be received within thirty (30) days after publication of this notice in the Missouri Register. No public hearing is scheduled.*

AUTHORITY: *sections 208.152, 208.153, [and] 208.201, and 660.017, RSMo 2016. This rule was previously filed as 13 CSR 40-81.050. Original rule filed Feb. 13, 1969, effective Feb. 23, 1969. For intervening history, please consult the Code of State*

**FISCAL NOTE
PUBLIC COST**

- I. Department Title:** Title 13 - Department of Social Services
Division Title: Division 70 - MO HealthNet Division
Chapter Title: Chapter 15 – Hospital Program

Rule Number and Title:	13 CSR 70-15.010 Inpatient Hospital Services Reimbursement Plan; Outpatient Hospital Services Reimbursement Methodology
Type of Rulemaking:	Emergency Amendment

II. SUMMARY OF FISCAL IMPACT

Affected Agency or Political Subdivision	Estimate Cost of Compliance in the Aggregate
Department of Social Services, MO HealthNet Division	SFY 2019 Impact: Total Cost = \$39 million; State Share = \$13.6 million

III. WORKSHEET**Estimated Cost for SFY 2019:**

Estimated Payments with 2.8% Trend	\$2,163,340,911
Estimated Payments without 2.8% Trend	\$2,124,303,109
Estimated Impact of 2.8% Trend	\$39,037,801
State Share Percentage	34.797%
State Share	\$13,583,984

IV. ASSUMPTIONS

The estimated cost is based upon the data in FRA 19-1. The base year for the SFY 2019 payments are the 2015 cost reports which are adjusted by the applicable trends published in 13 CSR 70-15.010 and the 2.8% trend for SFY 2019, which is the subject of this emergency amendment.

**Title 13—DEPARTMENT OF SOCIAL SERVICES
Division 70—MO HealthNet Division
Chapter 15—Hospital Program**

PROPOSED AMENDMENT

13 CSR 70-15.110 Federal Reimbursement Allowance (FRA). The division is amending subsection(1)(A) and adding section (22).

PURPOSE: This amendment provides for the State Fiscal Year (SFY) 2019 trend factor to be applied to the inpatient and outpatient adjusted net revenues determined from the Federal Reimbursement Allowance (FRA) fiscal year cost report to determine the inpatient and outpatient adjusted net revenues subject to the FRA assessment. Additionally, this amendment establishes the FRA assessment effective July 1, 2018 at a rate of five and sixty hundredths percent (5.60%) of each hospital's inpatient and outpatient adjusted net revenues.

(1) Federal Reimbursement Allowance (FRA). FRA shall be assessed as described in this section.

(A) Definitions.

1. Bad debts—Amounts considered to be uncollectible from accounts and notes receivable that were created or acquired in providing services. Allowable bad debts include the costs of caring for patients who have insurance, but their insurance does not cover the particular service procedures or treatment rendered.

2. Base cost report—Desk-reviewed Medicare/Medicaid cost report. The Medicare/Medicaid Cost Report version 2552-96 (CMS 2552-96) shall be used for fiscal years ending on or after September 30, 1996. The Medicare/Medicaid Cost Report version 2552-10 (CMS 2552-10) shall be used for fiscal years beginning on and after May 1, 2010. When a hospital has more than one (1) cost report with periods ending in the base year, the cost report covering a full twelve- (12-) month period will be used. If none of the cost reports covers a full twelve (12) months, the cost report with the latest period will be used. If a hospital's base cost report is less than or greater than a twelve- (12-) month period, the data shall be adjusted, based on the number of months reflected in the base cost report, to a twelve- (12-) month period.

3. Charity care—Those charges written off by a hospital based on the hospital's policy to provide health care services free of charge or at a reduced charge because of the indigence or medical indigence of the patient.

4. Contractual allowances—Difference between established rates for covered services and the amount paid by third-party payers under contractual agreements. The Federal Reimbursement Allowance (FRA) is a cost to the hospital, regardless of how the FRA is remitted to the MO HealthNet Division, and shall not be included in contractual allowances for determining revenues. Any redistributions of MO HealthNet payments by private entities acting at the request of participating health care providers shall not be included in contractual allowances or determining revenues or cost of patient care.

5. Department—Department of Social Services.

6. Director—Director of the Department of Social Services.

7. Division—MO HealthNet Division, Department of Social Services.

8. Engaging in the business of providing inpatient health care—Accepting payment for inpatient services rendered.

9. Federal Reimbursement Allowance (FRA)—The fee assessed to hospitals for the privilege of engaging in the business of providing inpatient health care in Missouri. The FRA is an allowable cost to the hospital.

10. Fiscal period—Twelve- (12-) month reporting period determined by each hospital.

11. Gross hospital service charges—Total charges made by the hospital for inpatient and outpatient hospital services that are covered

under 13 CSR 70-15.010.

12. Hospital—A place devoted primarily to the maintenance and operation of facilities for the diagnosis, treatment, or care for not fewer than twenty-four (24) hours in any week of three (3) or more nonrelated individuals suffering from illness, disease, injury, deformity, or other abnormal physical conditions; or a place devoted primarily to provide, for not fewer than twenty-four (24) hours in any week, medical or nursing care for three (3) or more nonrelated individuals. The term hospital does not include convalescent, nursing, shelter, or boarding homes as defined in Chapter 198, RSMo.

13. Hospital revenues subject to FRA assessment effective July 1, 2008—Each hospital's inpatient adjusted net revenues and outpatient adjusted net revenues subject to the FRA assessment will be determined as follows:

A. Obtain "Gross Total Charges" from Worksheet G-2, Line 25, Column 3 from CMS 2552-96, or Worksheet G-2, Line 28, Column 3 from CMS 2552-10, of the third prior year cost report (i.e., FRA fiscal year cost report) for the hospital. Charges shall exclude revenues for physician services. Charges related to activities subject to the Missouri taxes assessed for outpatient retail pharmacies and nursing facility services shall also be excluded. "Gross Total Charges" will be reduced by the following:

(I) "Nursing Facility Charges" from Worksheet C, Part I, Line 35, Column 6 from CMS 2552-96, or Worksheet C, Part I, Line 45, Column 6 from CMS 2552-10;

(II) "Swing Bed Nursing Facility Charges" from Worksheet G-2, Line 5, Column 1 from CMS 2552-96, or Worksheet G-2, Line 6, Column 1 from CMS 2552-10;

(III) "Nursing Facility Ancillary Charges" as determined from the Department of Social Services, MO HealthNet Division, nursing home cost report. (Note: To the extent that the gross hospital charges, as specified in subparagraph (1)(A)13.A. above, include long-term care charges, the charges to be excluded through this step shall include all long-term care ancillary charges including skilled nursing facility, nursing facility, and other long-term care providers based at the hospital that are subject to the state's provider tax on nursing facility services.);

(IV) "Distinct Part Ambulatory Surgical Center Charges" from Worksheet G-2, Line 22, Column 2 from CMS 2552-96, or Worksheet G-2, Line 25, Column 2 from CMS 2552-10;

(V) "Ambulance Charges" from Worksheet C, Part I, Line 65, Column 7 from CMS 2552-96, or Worksheet C, Part I, Line 95, Column 7 from CMS 2552-10;

(VI) "Home Health Charges" from Worksheet G-2, Line 19, Column 2 from CMS 2552-96, or Worksheet G-2, Line 22, Column 2 from CMS 2552-10;

(VII) "Total Rural Health Clinic Charges" from Worksheet C, Part I, Column 7, Lines 63.50–63.59 from CMS 2552-96, or Worksheet C, Part I, Column 7, Line 88 and subsets from CMS 2552-10; and

(VIII) "Other Non-Hospital Component Charges" from Worksheet G-2, Lines 6, 8, 21, 21.02, 23, and 24 from CMS 2552-96, or Worksheet G-2, Lines 5, 7, 9, 21, 24, 26, and 27 from CMS 2552-10;

B. Obtain "Net Revenue" from Worksheet G-3, Line 3, Column 1. The state will ensure this amount is net of bad debts and other uncollectible charges by survey methodology;

C. "Adjusted Gross Total Charges" (the result of the computations in subparagraph (1)(A)13.A.) will then be further adjusted by a hospital-specific collection-to-charge ratio determined as follows:

(I) Divide "Net Revenue" by "Gross Total Charges"; and

(II) "Adjusted Gross Total Charges" will be multiplied by the result of part (1)(A)13.C.(I) to yield "Adjusted Net Revenue";

D. Obtain "Gross Inpatient Charges" from Worksheet G-2, Line 25, Column 1 from CMS 2552-96, or Worksheet G-2, Line 28, Column 1 from CMS 2552-10, of the most recent cost report that is available for a hospital;

E. Obtain "Gross Outpatient Charges" from Worksheet G-2,

Line 25, Column 2 from CMS 2552-96, or Worksheet G-2, Line 28, Column 2 from CMS 2552-10, of the most recent cost report that is available for a hospital;

F. Total “Adjusted Net Revenue” will be allocated between “Net Inpatient Revenue” and “Net Outpatient Revenue” as follows:

(I) “Gross Inpatient Charges” will be divided by “Gross Total Charges”;

(II) “Adjusted Net Revenue” will then be multiplied by the result to yield “Net Inpatient Revenue”; and

(III) The remainder will be allocated to “Net Outpatient Revenue”; and

G. The trend indices listed below will be applied to the apportioned inpatient adjusted net revenue and outpatient adjusted net revenue in order to inflate or trend forward the adjusted net revenues from the FRA fiscal year cost report to the current state fiscal year to determine the inpatient and outpatient adjusted net revenues subject to the FRA assessment.

(I) SFY 2009 = 5.50%

(II) SFY 2009 Missouri Specific Trend = 1.50%

(III) SFY 2010 = 3.90%

(IV) SFY 2010 Missouri Specific Trend = 1.50%

(V) SFY 2011 = 3.20%

(VI) SFY 2012 = 5.33%

(VII) SFY 2013 = 4.4%

(VIII) SFY 2014 =

(a) Inpatient Adjusted Net Revenues—0%

(b) Outpatient Adjusted Net Revenues—3.70%

(IX) SFY 2015 =

(a) Inpatient Adjusted Net Revenues—0%

(b) Outpatient Adjusted Net Revenues—4.30%

(X) SFY 2016 =

(a) Inpatient Adjusted Net Revenues—0%

(b) Outpatient Adjusted Net Revenues—3.90%

(XI) SFY 2017 =

(a) Inpatient Adjusted Net Revenues—0%

(b) Outpatient Adjusted Net Revenues—4.10%

(XII) SFY 2018 =

(a) Inpatient Adjusted Net Revenues—0%

(b) Outpatient Adjusted Net Revenues—0%

(XIII) SFY 2019 =

(a) Inpatient Adjusted Net Revenues—0%

(b) Outpatient Adjusted Net Revenues—0%

14. Net operating revenue—Gross charges less bad debts, less charity care, and less contractual allowances times the trend indices listed in 13 CSR 70-15.010(3)(B).

15. Other operating revenues—The other operating revenue is total other revenue less government appropriations, less donations, and less income from investments times the trend indices listed in 13 CSR 70-15.010(3)(B).

(22) Beginning July 1, 2018, the FRA assessment shall be determined at the rate of five and sixty hundredths percent (5.60%) of each hospital’s inpatient adjusted net revenues and outpatient adjusted net revenues as set forth in paragraph (1)(A)13. The FRA assessment rate of five and sixty hundredths percent (5.60%) will be applied individually to the hospital’s inpatient adjusted net revenues and outpatient adjusted net revenues. The hospital’s total FRA assessment is the sum of the assessment determined from its inpatient adjusted net revenue plus the assessment determined for its outpatient adjusted net revenue.

AUTHORITY: sections 208.201, 208.453, [and] 208.455, and 660.017, RSMo 2016. Emergency rule filed Sept. 21, 1992, effective Oct. 1, 1992, expired Jan. 28, 1993. Emergency rule filed Jan. 15, 1993, effective Jan. 25, 1993, expired May 24, 1993. Original rule filed Sept. 21, 1992, effective June 7, 1993. For intervening history, please consult the Code of State Regulations. Emergency amendment filed June 21, 2018, effective July 1, 2018, expires Feb. 28, 2019.

Amended: Filed June 21, 2018.

PUBLIC COST: This proposed amendment will result in FRA Assessment cost to state agencies or political subdivisions of approximately \$3.2 million.

PRIVATE COST: This proposed amendment will result in FRA Assessment cost to private entities of approximately \$29.3 million.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Department of Social Services, Legal Services Division-Rulemaking, PO Box 1527, Jefferson City, MO 65102-1527, or by email to Rules.Comment@dss.mo.gov. To be considered, comments must be received within thirty (30) days after publication of this notice in the Missouri Register. No public hearing is scheduled.

**FISCAL NOTE
PUBLIC COST**

- I. Department Title:** Title 13 - Department of Social Services
Division Title: Division 70 - MO HealthNet Division
Chapter Title: Chapter 15 - Hospital Program

Rule Number and Title:	13 CSR 70-15.110 Federal Reimbursement Allowance (FRA)
Type of Rulemaking:	Proposed Amendment

II. SUMMARY OF FISCAL IMPACT

Affected Agency or Political Subdivision	Estimated Cost of Compliance in the Aggregate
Hospitals which provide health care services in Missouri that are owned or controlled by the state, counties, cities, or hospital districts	Estimated cost for SFY 2019 \$3.2 million

III. WORKSHEET

Estimated Assessment at 5.60% for SFY 2019:

	No. of Facilities	Inpatient Revenues	Outpatient Revenues	Total
Public Facilities Revenues	40	\$1,568,471,062	\$1,670,312,397	\$3,238,783,459
FRA Assessment Rate		5.60%	5.60%	5.60%
Total Assessment without Trend		\$87,834,379	\$93,537,494	\$181,371,874

IV. ASSUMPTIONS

This fiscal note reflects the total FRA Assessment of 5.60% for July 1, 2018 through June 30, 2019. The FRA Assessment to be collected during SFY 2019 is estimated at approximately \$181.4 million which is an FRA Assessment increase to the public facilities of approximately \$3.2 million as compared to the SFY 2018 FRA Assessment. Note that the FRA Assessment for SFY 2018 was 5.70% for the first quarter and 5.50% for the last three quarters.

The fiscal note is based on establishing the FRA assessment rate as noted above and a trend of 0.0% on inpatient and outpatient revenues effective for dates of service beginning July 1, 2018. The FRA assessment rate is levied upon Missouri hospitals' trended, inpatient and outpatient net adjusted revenues in accordance with the Missouri Partnership Plan.

FISCAL NOTE PRIVATE COST

- I. Department Title:** Title 13 - Department of Social Services
Division Title: Division 70 - MO HealthNet Division
Chapter Title: Chapter 15 – Hospital Program

Rule Number and Title:	13 CSR 70-15.110 Federal Reimbursement Allowance (FRA)
Type of Rulemaking:	Proposed Amendment

II. SUMMARY OF FISCAL IMPACT

Estimate of the number of entities by class which would likely be affected by the adoption of the proposed rule:	Classification by types of the business entities which would likely be affected:	Estimate in the aggregate as to the cost of compliance with the rule by the affected entities:
99	Hospitals	Estimated cost for SFY 2019 \$29.3 million

III. WORKSHEET

Estimated Assessment at 5.60% for SFY 2019:

	No. of Facilities	Inpatient Revenues	Outpatient Revenues	Total
Private Facilities Revenues	99	\$7,988,521,499	\$8,882,143,205	\$16,870,664,704
FRA Assessment Rate		5.60%	5.60%	5.60%
Total Assessment without Trend		\$447,357,204	\$497,400,019	\$944,757,223

IV. ASSUMPTIONS

This fiscal note reflects the total FRA Assessment of 5.60% for July 1, 2018 through June 30, 2019. The FRA Assessment to be collected during SFY 2019 is estimated at approximately \$944.8 million which is an FRA Assessment increase to the private facilities of approximately \$29.3 million as compared to the SFY 2018 FRA Assessment. Note that the FRA Assessment for SFY 2018 was 5.70% for the first quarter and 5.50% for the last three quarters.

The fiscal note is based on establishing the FRA assessment rate as noted above and a trend of 0.0% on inpatient and outpatient revenues effective for dates of service beginning July 1, 2018. The FRA assessment rate is levied upon Missouri hospitals' trended, inpatient and outpatient net adjusted revenues in accordance with the Missouri Partnership Plan.

**Title 20—DEPARTMENT OF INSURANCE,
FINANCIAL INSTITUTIONS AND PROFESSIONAL
REGISTRATION
Division 2200—State Board of Nursing
Chapter 4—General Rules**

PROPOSED AMENDMENT

20 CSR 2200-4.020 Requirements for Licensure. The board is amending sections (1), (2), (3), (5), and (7)–(13), deleting section (6), and renumbering as necessary.

PURPOSE: This amendment updates the requirements for nurse licensure.

(1) Examination.

(A) Written examination as used in Chapter 335, RSMo, shall mean *[either a paper and pencil examination or a computerized adaptive]* the National Council of State Boards of Nursing's licensure examination.

(D) The candidate *[shall make written application to the Missouri State Board of Nursing for permission to take the licensing examination for professional/practical nurses. Application forms for the licensing examination shall be obtained from the Missouri State Board of Nursing.]* must file a complete application containing data and documents required by the board. The application must be properly attested to and executed before a notary public. Any application for licensure submitted to the board is valid from one (1) year from the date the application is notarized. After the expiration of one (1) year, an applicant shall submit a new application. An application notarized more than sixty (60) days prior to receipt by the Missouri State Board of Nursing will be rejected and returned to the applicant.

1. Any applicant applying for the practical nurse licensing examination who is deficient in theory, clinical experience, or both, as stated in 20 CSR 2200, Chapter 3—Practical Nursing, and has not earned a practical nursing degree or met the requirements for a comparable period of training as determined by the board pursuant to 20 CSR 2200-4.020(1)(B) or (C), will not be approved.

(E) *[A completed application for the licensing examination signed and accompanied by one (1) two-inch by two-inch (2" × 2") portrait/photograph of the applicant shall be submitted to the Missouri State Board of Nursing for evaluation along with the required examination fee, and proof of submission of fingerprints to the Missouri State Highway Patrol's approved vendor for both a Missouri State Highway Patrol and Federal Bureau of Investigation fingerprint background check prior to the established deadline date set by the Missouri State Board of Nursing. Proof shall consist of any documentation acceptable to the board. Any fees due for fingerprint background checks shall be paid by the applicant directly to the Missouri State Highway Patrol or its approved vendor. All fees are nonrefundable. Note: The name appearing on the application will be the only legal name of the individual recognized by the Missouri State Board of Nursing unless evidence of the change in name has been submitted.]* The applicant shall submit to state and federal fingerprint or other biometric criminal background checks.

(F) An application for *[a candidate's first licensing]* licensure by examination *[in Missouri shall bear the school seal and the signature of the director of the program of professional/practical nursing. This shall indicate the endorsement of the candidate to take the licensing examination. The affidavit portion of the application shall be properly executed before a notary public.]* shall include verification of graduation or eligibility for graduation from an approved nursing program.

(G) The term first licensing examination scheduled by the board,

as used in section 335.081, RSMo, *[shall]* means the first licensure examination taken by the *[student/]* applicant which must be taken within ninety (90) days of graduation.

(H) An applicant for licensure by endorsement or licensure by examination who answers yes to one (1) or more of the questions on the application or the fingerprint checks reveal charges and/or convictions which relate to possible grounds for denial of licensure under section 335.066, RSMo shall submit copies of appropriate documents, as requested by the board, related to that answer or the fingerprint check before his/her application will be considered complete. The copies shall be certified if they are records of a court or administrative government agency. An applicant for licensure by endorsement or licensure by examination who the executive director or designee determines may not meet the requirements for licensure or examination shall be notified that the application will be reviewed by the members of the board at the board's next regular scheduled meeting following receipt of all requested documents. The Missouri State Board of Nursing shall notify *[, by certified mail or delivery,]* any individual who is refused permission to take an examination for licensure or an individual licensed in another state, territory, or foreign country that is denied a license by endorsement without examination. At the time of notification, this individual is to be made aware of his/her avenue of appeal through the Missouri Administrative Hearing Commission.

(J) An original examination report *[shall]* will be forwarded to the examinee. A copy *[shall]* will be retained in the permanent application on file in the Missouri State Board of Nursing office. A composite report *[shall]* will be forwarded to the director of each program of professional/ practical nursing listing the names of the candidates and the pass/fail designation for each candidate.

(L) *[There shall be a thirty (30)-day grace period for graduates who have successfully passed the first available licensing examination in another state following graduation to obtain a temporary permit or license in Missouri after the graduate has received his/her results.]* **Proof of United States citizenship or alien status as specified in 8 U.S.C.A. section 1621 or lawful presence as specified in section 208.009, RSMo.**

(M) Requests for Examination Modification.

1. The Missouri State Board of Nursing and its test service *[shall]* will determine if a candidate *[shall]* will be allowed modification of the examination if the candidate requests the modification because of a disability defined by the Americans with Disabilities Act.

2. The candidate requesting modification shall submit a request to the Missouri State Board of Nursing. The request shall contain—

A. A letter from the candidate's nursing education program indicating what modifications, if any, were granted by that program;

B. Appropriate documentation supporting the request for accommodation from a qualified professional with expertise in the areas of the diagnosed disability. Documentation must include:

(I) A history of the disability and any past accommodation granted the candidate and a description of its impact on the individual's functioning;

(II) Identification of the specific standardized and professionally recognized tests/assessments given (e.g., Woodcock-Johnson, Weschler Adult Intelligence Scale);

(III) Clinical diagnoses of disability (where applicable, list the DSM Code Number and Title);

(IV) The scores resulting from testing, interpretation of the scores, and evaluations; and

(V) Recommendations for testing accommodations with a stated rationale as to why the requested accommodation is necessary and appropriate for the diagnosed disability; and

C. A letter from the applicant requesting the modifications detailing the specific modifications and explaining the rationale for the modifications.

3. When the request is received from the candidate with the previously listed items, the request will be reviewed.

4. If approved, a request for modification of an examination will be submitted to *[the National Council of State Boards of Nursing, Incorporated]* the test service.

[5. After the National Council of State Boards of Nursing, Incorporated has reported its decision to the Missouri State Board of Nursing, the candidate will be notified of the decision.]

6. A handicapped individual is defined in the Rehabilitation Act of 1973.]

(2) Repeat Examination.

(A) A candidate who does not achieve the passing designation as determined by the Missouri State Board of Nursing shall not qualify to receive a license to practice professional/practical nursing in Missouri. **A repeat examination application will be provided to the candidate with the exam results.** It shall be unlawful for any person to practice professional/practical nursing in Missouri as a graduate nurse after failure of the National Council of State Boards of Nursing, Incorporated licensure examination until successfully passing the examination and receiving a license.

[(B) A candidate who does not achieve the passing designation who wishes to review, challenge, or both, the National Council Licensure Examination must send a written letter of request to the Missouri State Board of Nursing office no later than four (4) months after release of examination results to the candidate.]

(C) If approved, the request is submitted to the National Council of State Boards of Nursing, Incorporated. A board fee may be charged.

(D) A candidate who does not achieve the passing designation shall be notified. No further examination notices shall be issued by the Missouri State Board of Nursing.]

[(E)](B) [The required fee shall be submitted to the Missouri State Board of Nursing office each time the candidate applies for the examination and is nonrefundable.] In order to retake the licensure examination, the candidate must file a repeat examination application containing data and documents required by the board. The repeat examination application must be properly attested to and executed before a notary public. Any repeat examination application submitted to the board is valid one (1) year from the date the application is notarized. After the expiration of one (1) year, an applicant shall submit a new repeat examination application. An application notarized more than sixty (60) days prior to receipt by the Missouri State Board of Nursing will be rejected and returned to the applicant.]

(C) The applicant shall submit to state and federal fingerprint or other biometric criminal background checks if the applicant's previous background checks are more than one (1) year old.

(3) A graduate of a nursing program may practice as a graduate nurse until he/she has received the results of the first licensure examination taken by the nurse or until ninety (90) days after graduation, whichever first occurs. **The graduate nurse shall practice with proper supervision. Proper supervision means the general oversight and initial and ongoing direction in any given situation including, but not limited to, orientation, procedural guidance, and periodic inspection and evaluations.**

(5) Licensure by Endorsement in Missouri—Registered Nurses (RNs) and Licensed Practical Nurses (LPNs).

(A) A professional/practical nurse licensed in another state or territory of the United States *[shall be]* **may be** entitled to licensure provided qualifications are equivalent to the requirements of Missouri at the time of original licensure. This equivalency *[shall be]* is defined as—

1. Evidence of completion and graduation from an approved program of professional/practical nursing if educated in a state of the United States; a course-by-course evaluation report received directly

from a credentials evaluation service approved by the board or a Commission on Graduates of Foreign Nursing Schools (CGFNS) certificate if the initial nursing education was earned in a territory, Canada, or another country;

2. Attainment of a passing standard score or pass designation as determined by the Missouri State Board of Nursing on the licensing examination or attainment of an acceptable grade in areas comparable to those required in Missouri at the time licensure was secured in the state of original licensure;

3. Evidence of completion of the applicable secondary education set forth in section 335.046, RSMo, requirements or the equivalent as determined by the State Department of Education;

4. Applicants who are not citizens of the United States who have completed programs in schools of professional/practical nursing in states which require citizenship for licensure may take the National Council Licensure Examination for professional/practical nurses in Missouri if they meet all of Missouri's requirements; and

5. If an individual was licensed by waiver as a practical/vocational nurse in another state, territory, or foreign country prior to July 1, 1955, and the individual meets the requirements for licensure as a practical nurse in Missouri which were in effect at the time the individual was licensed in the other jurisdiction, she/he is eligible for licensure in Missouri as an LPN. If an individual is licensed by waiver in another state after July 1, 1955, she/he does not qualify for licensure by waiver in Missouri as a practical nurse.

(B) Procedure for Application.

1. *[An applicant should request an application for endorsement licensure from the Missouri State Board of Nursing. The request shall include the full name, current mailing address and state of original licensure.]* **The applicant must file a complete application containing data and documents required by the board. The application must be properly attested to and executed before a notary public. Any application for licensure submitted to the board is valid for one (1) year from the date the application is notarized. After the expiration of one (1) year, an applicant shall submit a new application, along with the required fee. An application notarized more than sixty (60) days prior to receipt by the Missouri State Board of Nursing will be rejected and returned to the applicant.**

2. *[The application for endorsement licensure shall be completed in black ink with the affidavit portion properly executed before a notary public and submitted with the required application fee, and proof of submission of fingerprints to the Missouri State Highway Patrol's approved vendor for both a Missouri State Highway Patrol and Federal Bureau of Investigation fingerprint background check. Proof shall consist of any documentation acceptable to the board. Any fees due for fingerprint background checks shall be paid by the applicant directly to the Missouri State Highway Patrol or its approved vendor. All fees are nonrefundable. The application shall be submitted to the Missouri State Board of Nursing.]* **The applicant shall submit to state and federal fingerprint or other biometric criminal background checks as administered through the Missouri State Highway Patrol.**

3. *The [endorsement/verification of licensure form shall be forwarded by the applicant to the board of nursing for completion in the state or territory of original licensure by examination, or to Canada, with a request to submit the completed form to the Missouri State Board of Nursing]* **applicant shall provide for receipt of official verification of licensure from all states and/or territories.**

4. The applicant shall cause an official nursing transcript to be forwarded directly to the Missouri State Board of Nursing office if a transcript is requested by the executive director or designee.

5. *[A final evaluation of the submitted application shall be made only after all required credentials are assembled.]* **Proof of United States citizenship or alien status as specified in 8 U.S.C.A. section 1621 or lawful presence as specified in section**

208.009, RSMo.

6. *[The applicant shall be notified of this evaluation for licensure.] The board will not review a submitted application for licensure until such time as all required credentials are received.*

[(6) Applicants Not Meeting Requirements.

(A) An applicant who does not meet the Missouri requirements for licensure at the time of completion of a program of professional/practical nursing shall be advised regarding the necessary steps for qualification on the basis of the particular deficiency.

(B) An applicant who has not attained the passing score or grade on the licensing examination as required by the Missouri State Board of Nursing at the time of original licensure shall be required to take the current National Council Licensure Examination (NCLEX®) and receive a pass designation prior to licensure.

(C) A professional/practical nurse licensed in another state or territory of the United States shall be entitled to licensure; provided, qualifications are equivalent to the requirements in Missouri at the time of original licensure.]

[(7)](6) Temporary Permit.

(A) [Applicants wishing to practice professional/practical nursing in Missouri following the evaluation of the application and transcript, if requested to determine if the applicant meets licensure requirements in Missouri, should submit a copy of a current nursing license from another state, territory, or Canada.] A single state temporary permit may be secured for a limited period of time six (6) months if otherwise eligible pursuant to Chapter 335, RSMo and these regulations until licensure is granted or denied by the Missouri State Board of Nursing or until the temporary permit expires, whichever comes first. If the applicant does not hold a current nursing license in another state, territory, or Canada, a temporary permit may be issued upon receipt of a completed endorsement verification of licensure [form] from the applicant's original state of licensure by examination and transcript, if requested. [Applicants from Canada may apply for a temporary permit provided for by rule.]

[(8)](7) Intercountry Licensure by Examination in Missouri—RN and LPN.

(A) Application Procedure.

1. A professional/practical nurse educated outside a state of the United States *[shall]* may be entitled to apply to take the examination for licensure if, in the opinion of the Missouri State Board of Nursing, current requirements for licensure in Missouri are met.

2. *[An applicant must request an Application for Professional/Practical Nurse Licensure by Examination. The request shall include the applicant's full name, current mailing address, and country of original licensure. The application shall be properly executed by the applicant in black ink and shall be included in the documents submitted to the Missouri State Board of Nursing for evaluation with the required credentials. All original documents shall be returned to the applicant.] The applicant shall file a complete application containing data and documents required by the board. The application shall be properly attested to and executed before a notary public. Any application for licensure submitted to the board is valid for one (1) year from the date the application is notarized. After the expiration of one (1) year, an applicant shall submit a new application, along with the required fee. An application notarized more than sixty (60) days prior to receipt by the Missouri State Board of Nursing will be rejected and returned to the applicant. Credentials in a foreign language shall be submitted in their original language and also a duplicate set translated into English, the translation shall be signed by the translator, and the signature shall be notarized by a notary public. The translation shall be*

attached to the credentials in a foreign language when submitted to the Missouri State Board of Nursing.

3. The required credentials for practical nurse applicants are—

A. A course-by-course evaluation report **and credentials evaluation report** received directly from a foreign **or other** credentials evaluation service approved by the board;

B. A photostatic copy of birth certificate (if a copy of birth certificate is not available, copy of baptismal certificate, passport, or notarized statement from an authorized agency will be accepted as verification of name, date of birth, and place of birth);

C. Photostatic copy of marriage license/certificate (if applicable);

D. Evidence of English-language proficiency by any of the following **submitted directly from the testing agency**:

(I) Test of English as a Foreign Language (TOEFL) www.toefl.org with a passing score of five hundred forty (540) on the paper examination or a passing score of two hundred seven (207) for the computerized examination or a passing score of seventy-six (76) on the Internet-based exam; or

(II) Test of English for International Communication (TOEIC) www.toeic.com with a passing score of seven hundred twenty-five (725); or

(III) International English Language Testing System (IELTS) www.ielts.org with a passing score in the academic module of six and one-half (6.5) and the Spoken Band score of seven (7);

E. Test of Spoken English (TSE®) Certificate indicating that the applicant has obtained a minimum overall score of fifty (50);

F. Photostatic copy of original license issued by the licensing agency where original licensure/registration was secured by examination; *[and]*

G. *[The completed application must be accompanied by one (1) two-inch by two-inch (2" × 2") portrait/photograph of the applicant, and proof of submission of fingerprints to the Missouri State Highway Patrol's approved vendor for both a Missouri State Highway Patrol and Federal Bureau of Investigation fingerprint background check. Proof shall consist of any documentation acceptable to the board. Any fees due for fingerprint background checks shall be paid by the applicant directly to the Missouri State Highway Patrol or its approved vendor, and the required application fee. All fees are nonrefundable.] Copy of Passport;*

H. Copy of original education certificate/diploma;

I. Copy of Transcript/Marksheet;

J. Copy of nursing education program transcripts and copy of certificate (if any);

K. Professional/Health License issued by the regulator of the country last worked in or home country professional / health license;

L. Employment Certificate/Experience Certificate/Relieving Letter/Last appraisal letter (if this includes the employment start date)/First and last salary slip (Recommendation letters are not acceptable documents for employment verification); and

M. The applicant shall submit to state and federal fingerprint or other biometric criminal background checks as administered through the Missouri State Highway Patrol.

4. The required credentials for professional nurse applicants are—

A. A course-by-course evaluation report received directly from a credentials evaluation service approved by the board or Commission on Graduates of Foreign Nursing Schools (CGFNS) certificate and evidence of English-language proficiency **submitted directly from the testing agency**. Any of the following is considered evidence of English-language proficiency:

(I) Test of English as a Foreign Language (TOEFL) www.toefl.org with a passing score of five hundred forty (540) on the paper examination or a passing score of two hundred seven (207) for the computerized examination or a passing score of seventy-six (76) on the Internet-based exam; or

(II) Test of English for International Communication (TOEIC) www.toEIC.com with a passing score of seven hundred twenty-five (725); or

(III) International English Language Testing System (IELTS) www.ielts.org with a passing score in the academic module of six and one-half (6.5) and the Spoken Band score of seven (7).

B. Test of Spoken English (TSE®) Certificate indicating that the applicant has obtained a minimum overall score of fifty (50);

[B./C. A photostatic copy of birth certificate (if a copy of birth certificate is not available, a copy of baptismal certificate, passport, or notarized statement from authorized agency will be accepted as verification of name, date of birth and place of birth);

[C./D. Photostatic copy of original license or certificate issued by the licensing agency where original licensure/registration was secured by examination;

[D./E. Photostatic copy of marriage license/certificate (if applicable); **and]**

[E./F. *The completed examination application with the required examination fee, one (1) two-inch by two-inch (2" x 2") portrait/photograph of the applicant, and proof of submission of fingerprints to the Missouri State Highway Patrol's approved vendor for both a Missouri State Highway Patrol and Federal Bureau of Investigation fingerprint background check. Proof shall consist of any documentation acceptable to the board. Any fees due for fingerprint background check shall be paid by the applicant directly to the Missouri State Highway Patrol or its approved vendor. All the credentials shall be submitted to the Missouri State Board of Nursing.]* **Copy of original education certificate/diploma;**

G. Copy of Transcript/Marksheet;

H. Copy of nursing education program transcripts and copy of certificate (if any);

I. Professional/Health License issued by the regulator of the country last worked in or home country professional / health license;

J. Employment Certificate/Experience Certificate/Relieving Letter/Last appraisal letter (if this includes the employment start date)/First and last salary slip (Recommendation letters are not acceptable documents for employment verification); and

K. Copy of passport.

[(B) Unqualified Applicants. An applicant who does not meet Missouri's current minimum requirements for licensure shall be advised regarding the necessary steps for qualification.]

[(C) The board of nursing will cooperate with the United States Immigration Service by advising it of the status of the applicant for nursing licensure, if requested.]

[(9)](8) Licensure Renewal.

(A) Renewal periods shall be for one (1), two (2), or three (3) years as determined by the board.

(B) The required fee and information related to the nurse's practice and demographics for the purpose of collecting nursing workforce data shall be submitted prior to the expiration date of the license *[lapses]*.

(C) In answer to requests for information regarding an individual's licensure, the staff of the board will verify status and other information as deemed appropriate by the executive director.

(D) The renewal application, any required documents and the appropriate fee should be received by the board a minimum of three (3) business days prior to the expiration date of the nurse's current license in order for the board to process the application prior to the expiration date. Failure to do so may result in the license becoming lapsed, which will require the nurse to complete a new application as set forth in 20 CSR 2200-4.020(10).

[(10)](9) Inactive Licenses.

(A) Any nurse possessing a current license to practice nursing in Missouri may place that license on inactive status by filing a written and signed request for inactive status with the board. This request may be accomplished, but need not be, by signing the request for inactive status which appears on the nurse's application for license renewal and returning that application to the board prior to the date the license *[has lapsed]* expires. **An inactive license shall be deemed expired.**

(B) Individuals wishing to reactivate licenses *[after being carried as inactive shall request a Petition for Renewal from the Missouri State Board of Nursing. Fees shall be accepted only if accompanied by a completed Petition for Renewal. The Petition for Renewal shall be accompanied by proof of submission of fingerprints to the Missouri State Highway Patrol's approved vendor for both a Missouri State Highway Patrol and Federal Bureau of Investigation fingerprint background check prior to the established deadline date set by the Missouri State Board of Nursing. Proof shall consist of any documentation acceptable to the board. Any fees due for fingerprint background checks shall be paid by the applicant directly to the Missouri State Highway Patrol or its approved vendor. All fees are nonrefundable. Back fees shall not be required for the years the licensee's records were carried as inactive. The Petition for Renewal shall also show, under oath or affirmation of the nurse, a statement—]* shall file a petition for license renewal containing data and documents required by the board. The petition must be properly attested to and executed before a notary public. Any application for licensure submitted to the board is valid for one (1) year from the date the application is notarized. After the expiration of one (1) year, an applicant shall submit a new application, along with the required fee. An application notarized more than sixty (60) days prior to receipt by the Missouri State Board of Nursing will be rejected and returned to the applicant.

1. *[That the nurse is not presently practicing nursing in Missouri; and]* The applicant must submit to state and federal fingerprint or other biometric criminal background checks as administered through the Missouri State Highway Patrol.

2. *[As to whether the]* If a nurse did practice nursing while the license was inactive *[and, if so,]* the nurse must disclose how long and where the practice of nursing occurred. If the nurse was practicing nursing in Missouri at the time his/her license was inactive, he/she also must submit a notarized statement indicating *[that]* whether and when he/she ceased working as soon as he/she realized that the license was inactive. In addition, the nurse must cause his/her employer to submit a statement on the employer's letterhead stationery or a notarized statement indicating *[that]* whether and when the nurse ceased working as soon as he/she realized that the license was inactive.

(C) No person shall practice nursing or hold him/herself out as a nurse in Missouri while his/her license is inactive.

(D) A nurse who *[petitions]* applies for renewal of an inactive license who answers yes to one (1) or more of the questions on the petition which relate to possible grounds for denial of renewal under section 335.066, RSMo, shall submit copies of appropriate documents related to that answer, as requested by the board, before his/her *[petition]* application will be considered complete. The copies shall be certified if they are records of a court or administrative government agency. If a nurse requesting reinstatement of his/her inactive license is denied by the State Board of Nursing based upon the fact that the nurse is subject to disciplinary action under any provisions of Chapter 335, RSMo, the nurse *[shall]* will be notified of the statutory right to file a complaint with the Administrative Hearing Commission.

(E) A nurse whose license is inactive for three (3) years or more shall file the *[petition]* application, documents, and fees required in subsection (10)(B). In addition, the nurse may be required to appear before the board personally and demonstrate evidence of current

nursing knowledge and may be required to successfully complete *[an oral or written examination, or both, provided by the board]* the National Council of State Boards of Nursing's licensure examination or to present proof of regular licensed nursing practice in *[other states]* another state(s) during that time period.

[(11)](10) Lapsed Licenses, When—Procedures for Reinstatement.

(A) Pursuant to sections 335.056 and 335.061, RSMo, a license issued by the State Board of Nursing to an RN or LPN is lapsed if the nurse fails to renew that license *[in a timely fashion. A license renewal is timely if the nurse mails a completed application for renewal, accompanied by the requisite fee, in a properly stamped and addressed envelope, postmarked no later than the expiration date of the nurse's current license. No person shall practice nursing or hold him/herself out as a nurse in Missouri while his/her license is registered with the State Board of Nursing as being lapsed.]* prior to the expiration date. A lapsed license is deemed expired. No person shall practice nursing or hold him/herself out as a nurse in Missouri while his/her license is lapsed.

(B) A nurse whose license has lapsed in Missouri *[for fewer than thirty (30) days may obtain renewal of that license by mailing the requisite fee to the proper address and postmarked no later than the thirtieth day of lapse. Satisfactory explanation of the lapse will be presumed. The State Board of Nursing, in its discretion, may not renew the license of any nurse who is subject to disciplinary action under Chapter 335, RSMo, but the board shall advise the nurse of the statutory right to file a complaint with the Administrative Hearing Commission.]* shall file a petition for license renewal containing data and documents required by the board. The petition must be properly attested to and executed before a notary public. Any application for licensure submitted to the board is valid for one (1) year from the date the application is notarized. After the expiration of one (1) year, an applicant shall submit a new application, along with the required fee. An application notarized more than sixty (60) days prior to receipt by the Missouri State Board of Nursing will be rejected and returned to the applicant.

[(C)] A nurse whose license has lapsed in Missouri for thirty (30) days or more, but fewer than three (3) years, must petition the State Board of Nursing for renewal of the license on a form furnished by the board. Accompanying the petition shall be a late renewal fee, the fee for the current renewal period as outlined in 20 CSR 2200-4.010, and proof of submission of fingerprints to the Missouri State Highway Patrol's approved vendor for both a Missouri State Highway Patrol and Federal Bureau of Investigation fingerprint background check prior to the established deadline date set by the Missouri State Board of Nursing. Proof shall consist of any documentation acceptable to the board. Any fees due for fingerprint background checks shall be paid by the applicant directly to the Missouri State Highway Patrol or its approved vendor. All fees are nonrefundable. If the nurse has practiced nursing in Missouri while the license was lapsed, in order to renew, the licensee must pay the lapsed fee, the renewal fee for each year he/she practiced nursing in Missouri, and the fee for the current renewal period. This petition shall show under oath or affirmation of the nurse—]

1. *[A statement that the nurse is not presently practicing nursing in Missouri;]* The applicant must submit to state and federal fingerprint or other biometric criminal background checks as administered through the Missouri State Highway Patrol; and

2. *[A statement as to whether the nurse did practice nursing while the license was lapsed and, if so, how long and where; and]*

[3.]2. If the nurse was practicing nursing in Missouri at the time his/her license was lapsed, he/she must submit a notarized statement indicating that he/she ceased working as soon as he/she realized *[that]* whether and when the license was lapsed. In addition, the nurse must cause his/her employer to submit a statement on the employer's letterhead stationery or a notarized statement indicating *[that]* whether and when the nurse ceased working as soon as he/she realized that the license was lapsed.

[(D)](C) A nurse whose license is lapsed for three (3) years or more shall file the same *[petition]* application, documents, and fees required in subsection (11)*[(C)](B)*. In addition, the nurse may be required to appear before the board personally and demonstrate evidence of current nursing knowledge and may be required to successfully complete *[an examination provided by the board]* the National Council of State Boards of Nursing's licensure examination or by proof of regular licensed nursing practice in *[other states]* another state(s) during that time period.

[(E)](D) Upon satisfactory completion of the requirements specified in subsections *[(11)(B)–(D)] (10)(B)–(C)* which are pertinent to that nurse, the board reserves the right to refuse to reinstate the lapsed license of any nurse, including one who is subject to disciplinary action under any provisions of Chapter 335, RSMo, which includes disciplinary action for practicing nursing without a license while that license is lapsed. A nurse who is petitioning for renewal of a lapsed license who answers yes to one (1) or more of the questions on the petition which relate to possible grounds for denial of renewal under section 335.066, RSMo, shall submit copies of appropriate documents, as requested by the board, related to that answer before his/her petition will be considered complete. The copies shall be certified if they are records of a court or administrative government agency. If a lapsed license is not reinstated, the board *[shall]* will notify the nurse of the fact and the statutory right to file a complaint with the Administrative Hearing Commission.

[(F)](E) If any provision of this rule is declared invalid by a court or agency of competent jurisdiction, the balance of this rule shall remain in full force and effect, severable from the invalid portion.

[(12)](11) Change of Name, Address, or Both.

(A) Original License. The original license may not be altered in any way; *it must remain in the name under which it was issued].*

(B) Current License.

1. Each Missouri licensed nurse shall notify the board within thirty (30) days of each name change.

2. Each Missouri licensed nurse shall notify the board within thirty (30) days of each address change.

[(13)](12) Retired License Status.

(A) An applicant for renewal of a nurse license who is retired from the profession may apply for a retired license status by completing a form provided by the board.

(B) Retired from the profession means that the licensee does not intend to practice nursing for monetary compensation for at least two (2) years; however, such person may provide volunteer services. **A retired license will only be a single-state license.**

(C) A licensee may qualify for retired license status provided the licensee:

1. Is retired from the profession;

2. Holds a current, unrestricted, and undisciplined nurse license; and

3. Submits the required form.

(D) Retired license renewal for a professional nurse *[shall be]* is biennial; occurring on odd-numbered years, and the license *[shall]* will expire on April 30 of each odd-numbered year. Retired license renewal for a practical nurse *[shall be]* is biennial; occurring on even-numbered years, and the license *[shall]* will expire on May 31 of each even-numbered year.

(E) Individuals wishing to reactivate licenses after being *[carried]*

as] retired [shall request a Petition for Renewal from the board. Fees shall be accepted only if accompanied by a completed petition for renewal. The Petition for Renewal shall be accompanied by proof of submission of fingerprints to the Missouri State Highway Patrol's approved vendor for both a Missouri State Highway Patrol and Federal Bureau of Investigation fingerprint background check prior to the established deadline date set by the Missouri State Board of Nursing. Proof shall consist of any documentation acceptable to the board. Any fees due for fingerprint background checks shall be paid by the applicant directly to the Missouri State Highway Patrol or its approved vendor. All fees are nonrefundable. Back fees shall not be required for the years the licensee's records were carried as retired. The Petition for Renewal shall show, under oath or affirmation of the nurse, a statement—] shall file a petition for license renewal containing data and documents required by the board. The petition shall be properly attested to and executed before a notary public. Any application for licensure submitted to the board is valid for one (1) year from the date the application is notarized. After the expiration of one (1) year, an applicant shall submit a new application, along with the required fee. An application notarized more than sixty (60) days prior to receipt by the Missouri State Board of Nursing will be rejected and returned to the applicant.

[1. That the nurse is not presently practicing nursing in Missouri for monetary compensation; and]

[2.]1. [As to whether the] If a nurse did practice nursing for monetary compensation while the license was retired [and, if so, how long and where. If the nurse was practicing nursing for monetary compensation in Missouri at the time his/her license was retired, he/she also must] **the nurse must disclose how long and where and** submit a notarized statement indicating employment dates, employer names and addresses, and an explanation of why the nurse practiced for compensation while the license was retired. In addition, the nurse must cause his/her employer to submit a statement on the employer's letterhead stationery or a notarized statement indicating [that] **whether and when** the nurse ceased working as soon as he/she realized that the license was retired.

(F) A nurse who petitions for renewal of a retired license, who answers yes to one (1) or more of the questions on the petition which relate to possible grounds for denial of renewal under section 335.066, RSMo, shall submit copies of appropriate documents related to that answer, as requested by the board, before his/her petition will be considered complete. The copies shall be certified if they are records of a court or administrative government agency. If a nurse requesting reinstatement of his/her retired license is denied by the State Board of Nursing based upon the fact that the nurse is subject to disciplinary action under any provisions of Chapter 335, RSMo, the nurse shall be notified of the statutory right to file a complaint with the Administrative Hearing Commission.

AUTHORITY: sections 335.036.1(2) and (7), 335.046, 335.051, and 335.066, RSMo 2016. This rule originally filed as 4 CSR 200-4.020. Original rule filed Oct. 14, 1981, effective Jan. 14, 1982. For intervening history, please consult the Code of State Regulations. Amended: Filed June 22, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed rule will save private entities approximately three thousand one hundred twelve dollars (\$3,112) annually for the life of the rule. It is anticipated that the costs will recur for the life of the rule, may vary with inflation, and are expected to increase at the rate projected by the Legislative Oversight Committee.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the State Board of Nursing, Lori Scheidt, Executive Director, PO Box 656, Jefferson City, MO 65102, by fax at (573) 751-0075 or via email at nursing@pr.mo.gov. To be considered, comments must be received within thirty (30) days after publication of this notice in the Missouri Register. No public hearing is scheduled.

PRIVATE ENTITY FISCAL NOTE

I. RULE NUMBER

Title 20 - Department of Insurance, Financial Institutions and Professional Registration
Division 2200 - State Board of Nursing
Chapter 4 - General Rules
Proposed Rule - 20 CSR 2200-4.020 - Requirements for Licensure

II. SUMMARY OF FISCAL IMPACT

Annual Cost of Compliance for the Life of the Rule

Estimate the number of entities by class which would likely be affected by the adoption of the proposed rule:	Classification by type of the business entities which would likely be affected:	Estimated cost of compliance with the rule by affected entities:
1	Registered Professional Nurse Applicants (License by Exam Fee of \$45)	\$45
1	Licensed Practical Nurse Applicants (License by Exam Fee of \$41)	\$41
5	Registered Professional Nurse Applicants (License by Intercountry Licensure Fee of \$45)	\$225
1	Licensed Practical Nurse Applicants (License by Intercountry Licensure Fee of \$41)	\$41
1	Registered Professional Nurse Applicants (License by Inactive Licensure Reinstatement Fee of \$60)	\$60
1	Licensed Practical Nurse Applicants (License by Inactive Licensure Reinstatement Fee of \$60)	\$60
1	Registered Professional Nurse Applicants (License by Lapsed Licensure Reinstatement Fee of \$60 and Lapsed Fee of \$50)	\$110
1	Licensed Practical Nurse Applicants (License by Lapsed Licensure Reinstatement Fee of \$52 and Lapsed Fee of \$50)	\$102
0	Registered Professional Nurse Applicants (License by Retired Licensure Reactivation Fee of \$60)	\$0
0	Licensed Practical Nurse Applicants (License by Retired Licensure Reactivation Fee of \$52)	\$0
1	Registered Professional Nurse Applicants (Reexamination Fee of \$40)	\$40

1	Licensed Practical Nurse Applicants (Reexamination Fee of \$40)	\$40
10	Registered Professional Nurse Applicants (License by Endorsement Fee of \$55)	\$550
5	Licensed Practical Nurse Applicants (License by Endorsement Fee of \$51)	\$255
29	Nursing Applicants (Background Check - \$44.80)	\$1,299
15	Nursing Applicants (Verification - \$10)	\$150
34	Nursing Applicants (Notary - \$2.00)	\$68
29	Nursing Applicants (Application Postage - \$.90)	\$26.10
Estimated Annual Cost of Compliance for the Life of the Rule		\$3,112

III. WORKSHEET

See table above.

IV. ASSUMPTION

1. The figures reported above are based on staff estimates.
2. The board estimates that there will be twenty-nine (29) applicants each year that will resubmit applications after the expiration of the one year period and five (5) applicants would have to resubmit an application that was notarized more than sixty (60) days prior to receipt by the board.
3. Most states have eliminated the verification fee, however, the \$10 amount is an average verification fee charged by the remaining states.
4. The board only receives about one reciprocity application per year. It is not anticipated that reciprocity applicants will reapply after one year.
5. Copy costs are not calculated.
6. It is anticipated that the total cost will recur for the life of the rule, may vary with inflation and is expected to increase at the rate projected by the Legislative Oversight Committee.

**Title 20—DEPARTMENT OF INSURANCE,
FINANCIAL INSTITUTIONS AND PROFESSIONAL
REGISTRATION
Division 2200—State Board of Nursing
Chapter 4—General Rules**

PROPOSED AMENDMENT

20 CSR 2200-4.030 Public Complaint Handling and Disposition Procedure. The board is amending sections (3), (4), (6), and (7), and deleting sections (9) and (10).

PURPOSE: This amendment deletes unnecessary language regarding the complaint procedure, clarifies how the board investigates complaint and removes unnecessary regulatory restrictions.

(3) The State Board of Nursing *[shall]* **will** receive and process each complaint made against any licensee or permit holder, which complaint alleges certain acts or practices which may constitute one (1) or more violations of the provisions of Chapter 335, RSMo. This only applies to complaints where there is sufficient information to investigate and the allegation(s), if true, would be a violation of the Nursing Practice Act. Any member of the public or profession, or any federal, state, or local officials may make and file a complaint with the board. No member of the State Board of Nursing *[shall]* **may** file a complaint with this board while holding that office, unless that member is excused from further board deliberations or activity concerning the matters alleged within that complaint. The executive director or any staff member of the board may file a complaint pursuant to this rule in the same manner as any member of the public.

(4) Complaints should be *[mailed, faxed, or delivered to the following address: Executive Director,]* **submitted to the** Missouri State Board of Nursing~~], 3605 Missouri Boulevard, PO Box 656, Jefferson City, MO 65102-0656].~~

(6) Each complaint received under this rule shall be logged in a *[book]* **computer database** maintained by the board for that purpose. *[Complaints shall be logged in consecutive order as received.]* The *[logbook]* **database** shall contain a record of each complainant's name and address; the name and address of the subject(s) of the complaint; the date each complaint is received by the board; a brief statement of the acts complained of; a notation whether the complaint resulted in its dismissal by the board or informal charges being filed with the Administrative Hearing Commission; and the ultimate disposition of the complaint. This *[logbook]* **database** shall be a closed record of the board.

(7) *[Each complaint received under this rule shall be acknowledged in writing. The complainant shall be informed as to whether the complaint is being investigated and later, if applicable, as to whether the complaint has been dismissed by the board.]* The complainant *[shall]* **will** be notified of the disciplinary action taken, if any. The provisions of this section shall not apply to complaints filed by staff members of the board based on information and belief, acting in reliance on third-party information received by the board.

[(9) This rule shall not be deemed to limit the board's authority to file a complaint with the Administrative Hearing Commission charging a licensee of the board with any actionable conduct or violation, whether or not such a complaint exceeds the scope of the acts charged in a preliminary public complaint filed with the board and whether or not any public complaint has been filed with the board.]

(10) *The board interprets this rule, which is required by law, to exist for the benefit of those members of the public who*

submit complaints to the board and for those persons or entities within the legislative and executive branches of government having supervisory or other responsibilities or control over the professional licensing boards. This rule is not deemed to protect or insure to the benefit of those licensees, permit holders, registrants or other persons against whom the board has instituted or may institute administrative or judicial proceeding concerning possible violations of the provisions of Chapter 335, RSMo.]

AUTHORITY: sections **324.002 and 335.036, RSMo** *[Supp. 2013]* **2016.** This rule originally filed as 4 CSR 200-4.030. Original rule filed Feb. 10, 1982, effective May 13, 1982. For intervening history, please consult the **Code of State Regulations**. Amended: Filed June 22, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the State Board of Nursing, Lori Scheidt, Executive Director, PO Box 656, Jefferson City, MO 65102, by fax at (573) 751-0075, or via email at nursing@pr.mo.gov. To be considered, comments must be received within thirty (30) days after publication of this notice in the **Missouri Register**. No public hearing is scheduled.

**Title 20—DEPARTMENT OF INSURANCE,
FINANCIAL INSTITUTIONS AND PROFESSIONAL
REGISTRATION
Division 2200—State Board of Nursing
Chapter 4—General Rules**

PROPOSED AMENDMENT

20 CSR 2200-4.040 Mandatory Reporting Rule. The board is amending sections (1), (2), and (4).

PURPOSE: This amendment clarifies the guidelines for mandatory reporting.

(1) The State Board of Nursing *[shall]* **will** receive and process any report from a hospital, ambulatory surgical center, *[or]* **as such terms are defined in Chapter 197, RSMo,** temporary nursing staffing agency, **nursing home, any nursing facility as such term is defined in Chapter 198, RSMo,** or any entity that employs or contracts with nurses to provide health care services to individuals concerning any disciplinary action against a nurse licensed under Chapter 335, RSMo or the voluntary resignation of any such nurse against whom any complaints or reports have been made which might have led to disciplinary action. Disciplinary action is defined in section 383.130, RSMo as any final action taken by the board of trustees or similarly empowered officials of a hospital or ambulatory surgical center, or owner or operator of a temporary nursing staffing agency, to reprimand, discipline, or restrict the practice of a health care professional. Only such reprimands, discipline, or restrictions in response to activities which are also grounds for disciplinary actions according to the professional licensing law for that health care professional shall be considered disciplinary actions for purposes of this definition.

(2) *[Reports to the board shall be in writing and shall comply with the minimum requirements as set forth in this rule.]* The

Board of Nursing will assume that all reports received from hospitals, ambulatory surgical centers, *[or] as such terms are defined in Chapter 197, RSMo*, temporary nursing staffing agencies, **nursing homes, any nursing facilities as such term is defined in Chapter 198, RSMo, or any entities that employs or contracts with nurses to provide health care services to individuals** will be treated as **provided** under section 383.133, RSMo. The information shall be submitted within fifteen (15) days of the final disciplinary action, and *[shall] should* contain, but need not be limited to—

(4) Any activity that is construed to be a cause for disciplinary action according to section 335.066, RSMo *[shall be deemed]* is reportable to the board. Nothing in this rule shall be construed as limiting or prohibiting any person from reporting a violation of the Nursing Practice Act directly to the State Board of Nursing.

AUTHORITY: sections 335.036 and 383.133, RSMo *[Supp. 2007]* 2016. This rule originally filed as 4 CSR 200-4.040. Original rule filed Aug. 5, 1987, effective Nov. 12, 1987. For intervening history, please consult the **Code of State Regulations**. Amended: Filed June 22, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the State Board of Nursing, Lori Scheidt, Executive Director, PO Box 656, Jefferson City, MO 65102, by fax at (573) 751-0075, or via email at nursing@pr.mo.gov. To be considered, comments must be received within thirty (30) days after publication of this notice in the **Missouri Register**. No public hearing is scheduled.

**Title 20—DEPARTMENT OF INSURANCE,
FINANCIAL INSTITUTIONS AND PROFESSIONAL
REGISTRATION
Division 2200—State Board of Nursing
Chapter 4—General Rules**

PROPOSED AMENDMENT

20 CSR 2200-4.100 Advanced Practice Registered Nurse. The board is amending all sections of the rule.

PURPOSE: This amendment brings the regulation in line with current statutory language, equalizes the requirements for maintenance of the Document of Recognition for the uncertified APRNs and updates titling with national standards.

(1) Definitions.

(C) Advanced nursing education program—

1. Prior to July 1, 1998, completion of a formal post-basic educational program from or formally affiliated with an accredited college, university, or hospital of at least one (1) academic year, which includes advanced nursing theory and clinical nursing practice, leading to a graduate degree or certificate with a concentration in an advanced practice nursing clinical specialty area.

2. From and after July 1, 1998, completion of a graduate degree from an accredited college or university with a concentration in an advanced practice nursing clinical specialty area, which includes advanced nursing theory and clinical nursing practice. From and after January 1, 2009, the program shall provide a minimum of five hundred (500) faculty supervised clinical hours.

(F) Advanced practice nursing *[clinical specialty]* **role—A** *[R]* recognized advanced body of nursing knowledge and specialized acts of advanced professional nursing practice **categorized into one (1) of these four (4) roles: certified registered nurse anesthetist (CRNA), certified nurse-midwife (CNM), certified clinical nurse specialist (CNS) and certified nurse practitioner (CNP).**

(J) **Population focus—Describes the type of patients that the APRN has been educated to provide care for, i.e. family/individual across the lifespan, adult-gerontology, pediatrics, neonatal, women's health/gender-related or psych/mental health.**

[(J)](K) Preceptorial experience—A designated portion of a formal educational program that is offered in a healthcare setting and affords students the opportunity to integrate theory and role in both the clinical specialty/practice area and advanced nursing practice through direct patient care/client management.

[(K)](L) Qualified preceptor—An APRN with a current unrestricted RN license who has a scope of practice which includes prescribing and has met the requirements for prescriptive authority; a licensed practitioner of medicine or osteopathy with unrestricted prescriptive authority.

(2) To Obtain APRN Recognition.

(A) After June 30, 1997, the MSBN *[shall]* **will** maintain an up-to-date roster of RNs recognized as eligible to practice as an APRN, *which shall be available to the public. A copy of the current roster can be obtained by contacting the MSBN*.

1. Temporary recognition—available to new graduate APRNs only—An RN who is a graduate registered nurse anesthetist, graduate nurse midwife, graduate nurse practitioner, or graduate clinical nurse specialist and desires to begin practice in their advanced practice role prior to the successful completion of their certification examination must be recognized by the MSBN and *[shall satisfy the following:]—*

A. Hold a current unencumbered license to practice in Missouri, or another compact state as an RN;

B. Submit completed Document of Recognition application and fee to the MSBN. Incomplete application forms and evidence will be considered invalid. Fees are not refundable;

C. Provide evidence of having successfully completed an advanced nursing education program as defined in subsection (1)(B) of this rule;

D. Register to take the first available certification examination administered by a nationally recognized certifying body acceptable to the MSBN;

E. Agree to notify the MSBN and employer of results within five (5) working days of receipt of results. If notification is of unsuccessful results, then agree to cease practice as an APRN immediately;

F. Be restricted from any prescriptive authority;

G. Have never been denied certification or had any certification suspended, revoked, or cancelled by an MSBN-approved nationally-recognized certifying body; and

H. *[Shall b/Be]* recognized for a period not greater than four (4) months from the date of graduation, pending a certification decision by an MSBN-approved nationally recognized certifying body.

(B) Initial Recognition—RNs who are certified registered nurse anesthetists (CRNA), certified nurse midwives (CNM), certified nurse practitioners, or certified clinical nurse specialists (CNS) applying for recognition from the MSBN for eligibility to practice as advanced practice registered nurses shall—

1. Hold a current unencumbered license to practice in Missouri or another compact state as an RN; and

2. Provide evidence of completion of appropriate advanced nursing education program as defined in subsection (1)(C) of this rule; and

3. Submit completed Document of Recognition application and appropriate fee to the MSBN. Incomplete application forms and evidence will be considered invalid. Fees are not refundable; and

4. Submit documentation of current certification in their respective advanced **practice nursing [clinical specialty area] population focus area of practice** by an MSBN-approved nationally-recognized certifying body, meeting the requirements of this rule; or

5. Before January 1, 2010, applicants for whom there is no appropriate certifying examination shall also provide the following documentation:

A. Evidence of successful completion of three (3) graduate credit hours of pharmacology offered by an accredited college or university within the previous five (5) years prior to the date of application to the board; and

B. Evidence of a minimum of eight hundred (800) hours of clinical practice in the advanced practice nursing clinical specialty area within two (2) years prior to date of application to the board; and

6. Each applicant is responsible for maintaining and providing documentation of satisfactory, active, up-to-date certification/recertification/maintenance and/or continuing education/competency status to the MSBN.

7. To be eligible for controlled substance prescriptive authority, the APRN applicant *[must]* **shall submit the following:**

A. *[Submit e]* Evidence of completion of an advanced pharmacology course that *[shall]* include preceptorial experience in the prescription of drugs, medicines, and therapeutic devices with a qualified preceptor. Evidence shall be submitted in the form of one (1) of the following:

(I) An official final transcript from their advanced practice program; or

(II) A letter from the school describing how this was integrated into the curriculum; or

(III) Evidence of successful completion of three (3) credit hours post-baccalaureate course in advanced pharmacology from an accredited college or university within the last five (5) years; or

(IV) Evidence of successful completion of forty-five (45) continuing education units in pharmacology within the last five (5) years; and

B. Provide evidence of completion of at least three hundred (300) clock hours of preceptorial experience in the prescription of drugs, medicines, and therapeutic devices with a qualified preceptor. The APRN applicant shall complete the form provided by the MSBN and include this form with the Document of Recognition application or at such time as the APRN has completed the required hours of preceptorial experience; *[and]*

C. Has had controlled substance prescriptive authority delegated in a collaborative practice arrangement under section 334.104, RSMo, with a Missouri licensed physician who has an unrestricted federal Drug Enforcement Administration (DEA) number and who is actively engaged in a practice comparable in scope, specialty, or expertise to that of the APRN. Submit the completed "Statement of Controlled Substance Delegation" form provided by the MSBN as part of the application process to the MSBN/.; and

D. Provide evidence of a minimum of one thousand (1,000) hours of practice in an advanced practice nursing category prior to application for a certificate of prescriptive authority. The one thousand (1,000) hours shall—

(I) Be obtained after graduation from the advanced practice nursing education program; and

(II) Include transmitting a prescription order orally, telephonically, or to an inpatient medical record from protocols developed in collaboration with and signed by a licensed physician. The APRN applicant shall complete the form provided by the MSBN and may include this form with the Document of Recognition application or at such time as the APRN has completed the required hours of practice in an advanced practice nursing category.

8. Once the APRN has received controlled substance prescriptive authority from the MSBN, he/she may apply for a BNDD registration number and a federal DEA registration number. Restrictions that may

exist on the collaborative physician's BNDD registration may also result in restrictions on the BNDD registration for the APRN. The instructions and the application needed for BNDD registration can be found at www.dhss.mo.gov/BNDD. For information regarding federal DEA registration, see www.DEADiversion.usdoj.gov.

(C) Continued Recognition for Certified APRNs—In order to maintain a current Document of Recognition, the APRN shall—

1. Maintain current RN licensure in Missouri or in another compact state. An RN license placed on inactive or lapsed status will automatically *[lapse]* **expire** the Document of Recognition regardless of current certification status; and

2. *[APRNs shall n]* Notify the MSBN within five (5) working days of any change in status, documentation, or other changes that may affect their recognition as an APRN; and

3. Provide evidence of recertification by a certifying body, approved by the MSBN, to the MSBN prior to the current expiration date. It is the APRN's responsibility to be sure that their recertification credentials have been received by the MSBN; *[or]* and

4. Adhere to all requirements of the BNDD and the federal DEA.

5. Failure to satisfy any of the applicable requirements of subsections (2)(A)–(C) of this rule shall result in the loss of recognition as an APRN in Missouri. Loss of recognition as an APRN results in ineligibility to call or title oneself or practice as an APRN but does not prevent the individual from practicing as an RN within his/her education, training, knowledge, judgment, skill, and competence as long as otherwise licensed to practice as an RN.

(D) Continued Recognition for Uncertified APRNs - In order to maintain a current Document of Recognition, the uncertified APRN shall—

[4.]/1. [If] Have been approved by the MSBN as noncertified prior to January 1, 2010, and every two (2) years *[shall]* thereafter provide evidence of—

A. A minimum of eight hundred (800) hours of clinical practice in their advanced practice nursing **[clinical specialty] population focus area** and in the advanced practice role; and

B. A minimum of sixty (60) contact hours in their advanced practice nursing **[clinical specialty area offered by an accredited college or university; and] population focus area of practice**. Formally approved continuing education hours shall meet one (1) or more of the criteria listed below:

(I) Continuing nursing education (CNE) approved for nursing contact hours by an accredited provider or approver of nursing continuing education;

(II) Continuing medical education (CME) approved for CME hours;

(III) Sponsored by organizations, agencies, or educational institutions accredited or approved by the American Nurses Credentialing Center (ANCC), the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), or the Commission on Dietetic Registration;

(IV) Provided by one (1) of these accepted agencies: American Nurses Association American Academy of Family Physicians (AAFP) American Academy of Physician Assistants (AAPA) American Association of Nurse Practitioners (AANP) American College of Nurse-Midwives (ACNM) American Psychiatric Association (APA) American Psychological Association (APA) American Psychiatric Nurses Association (APNA) Emergency Nurses Association (ENA) National Association of Nurse Practitioners in Women's Health (NPWH) National Association of Pediatric Nurse Associates and Practitioners (NAP-NAP);

(V) Independent study and/or e-learning approved for continuing education hours by one (1) of the accepted continuing education providers may be used for one hundred percent (100%) of the required continuing education hours (e.g. independent

study programs, online courses, articles from professional journals); and

2. Maintain current RN licensure in Missouri or in another compact state. An RN license placed on inactive or lapsed status will automatically expire the Document of Recognition regardless of current certification status; and

3. Notify the MSBN within five (5) working days of any change in status, documentation, or other changes that may affect their recognition as an APRN; and

[5.]4. Adhere to all requirements of the BNDD and the federal DEA; and

[6.]5. **Uncertified APRNs who fail to satisfy any of the applicable requirements of subsections (2)(A)–(C)], (B), and (D) of this rule [shall lose their recognition] will no longer be recognized as an APRN in Missouri.** Loss of recognition as an APRN results in ineligibility to call or title oneself or practice as an APRN but does not prevent the individual from practicing as an RN within his/her education, training, knowledge, judgment, skill, and competence **if the RN has an active license to practice as an RN.** [To regain recognition as an APRN, the individual must complete the application process described in paragraphs (2)(B)1.–8. of this rule.]

6. **Uncertified APRNs who fail to satisfy any of the applicable requirements of subsections (2)(A), (B), and (D) of this rule will no longer be recognized as an APRN in Missouri. To regain recognition, the uncertified APRN shall complete the application process described in paragraphs (2)(B)1.–8. of this rule, which includes the requirement for certification.**

(3) Titling.

(A) After June 30, 1997, only an RN meeting the requirements of this rule and recognized by the MSBN as an APRN *[shall have the right to]* **may** use any of the following titles or *[their]* abbreviations in clinical practice: advanced practice registered nurse (APRN); certified advanced practice registered nurse; nurse anesthetist; certified registered nurse anesthetist (CRNA); nurse midwife; certified nurse midwife (CNM); nurse practitioner (NP); certified nurse practitioner; certified nurse specialist (CNS); or certified clinical nurse specialist.

(B) *[RNs]* **A Registered Nurse (RN) recognized as an APRN [nurses] by the MSBN shall [specify their RN] use the title APRN and [clinical nursing specialty area designation,] may include their role and population focus (NP with population focus, CNS with population focus, CNM, or CRNA), and [may include] certification status, if applicable, for purposes of identification and documentation.**

(4) Scope of Practice.

(A) RNs recognized by the MSBN as being eligible to practice as an APRN shall function clinically—

1. Within the state of Missouri Nursing Practice Act, Chapter 335, RSMo, and all other applicable rules and regulations;

2. Within the professional scope and standards of their advanced practice nursing *[clinical specialty area]* **role and population focus** and consistent with their formal advanced nursing education and national certification, if applicable, or within their education, training, knowledge, judgment, skill, and competence as an RN; and

3. Within the regulations set forth by the BNDD and the federal DEA if deemed eligible to prescribe controlled substances by the MSBN.

(5) Certifying Body Criteria.

(C) The MSBN *[shall]* **will** identify, keep on file, and make available to the public the current list of nationally-recognized certifying bodies acceptable to the board of nursing. Nationally-recognized certifying bodies may be added or deleted from the board of nursing's list of nationally-recognized certifying bodies based on the criteria set forth in this rule. A copy of the current list *[can]* **may** be obtained by

contacting the Missouri State Board of Nursing, PO Box 656, Jefferson City, MO 65102, by calling (573) 751-0681, or on the website at www.pr.mo.gov/nursing.asp.

AUTHORITY: sections 335.016(2) and 335.036, RSMo [Supp. 2009] 2016. This rule originally filed as 4 CSR 200-4.100. Original rule filed Nov. 15, 1991, effective March 9, 1992. For intervening history, please consult the Code of State Regulations. Amended: Filed June 22, 2018.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the State Board of Nursing, Lori Scheidt, Executive Director, PO Box 656, Jefferson City, MO 65102, by fax at (573) 751-0075, or via email at nursing@pr.mo.gov. To be considered, comments must be received within thirty (30) days after publication of this notice in the Missouri Register. No public hearing is scheduled.

This section will contain the final text of the rules proposed by agencies. The order of rulemaking is required to contain a citation to the legal authority upon which the order of rulemaking is based; reference to the date and page or pages where the notice of proposed rulemaking was published in the *Missouri Register*; an explanation of any change between the text of the rule as contained in the notice of proposed rulemaking and the text of the rule as finally adopted, together with the reason for any such change; and the full text of any section or subsection of the rule as adopted which has been changed from that contained in the notice of proposed rulemaking. The effective date of the rule shall be not less than thirty (30) days after the date of publication of the revision to the *Code of State Regulations*.

The agency is also required to make a brief summary of the general nature and extent of comments submitted in support of or opposition to the proposed rule and a concise summary of the testimony presented at the hearing, if any, held in connection with the rulemaking, together with a concise summary of the agency's findings with respect to the merits of any such testimony or comments which are opposed in whole or in part to the proposed rule. The ninety-(90-) day period during which an agency shall file its Order of Rulemaking for publication in the *Missouri Register* begins either: 1) after the hearing on the Proposed Rulemaking is held; or 2) at the end of the time for submission of comments to the agency. During this period, the agency shall file with the secretary of state the order of rulemaking, either putting the proposed rule into effect, with or without further changes, or withdrawing the proposed rule.

Title 2—DEPARTMENT OF AGRICULTURE Division 10—Market Development Chapter 2—Subscription Fees

ORDER OF RULEMAKING

By the authority vested in the Missouri Department of Agriculture under section 261.020, RSMo 2016, the director rescinds a rule as follows:

2 CSR 10-2.010 Subscription Fees for the “Weekly Market News Summary” is rescinded.

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on April 2, 2018 (43 MoReg 666). No changes have been made in the proposed rescission, so it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: No comments were received.

Title 2—DEPARTMENT OF AGRICULTURE Division 10—Market Development Chapter 3—Usage Fees

ORDER OF RULEMAKING

By the authority vested in the Missouri Department of Agriculture under section 261.020, RSMo 2016, the director rescinds a rule as follows:

2 CSR 10-3.010 Usage Fees for the KCI Multipurpose Export Facility is rescinded.

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on April 2, 2018 (43 MoReg 666). No changes have been made in the proposed rescission, so it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: No comments were received.

Title 2—DEPARTMENT OF AGRICULTURE Division 10—Market Development Chapter 4—AgriMissouri Matching Fund Program

ORDER OF RULEMAKING

By the authority vested in the Missouri Department of Agriculture under section 261.020, RSMo 2016, the director rescinds a rule as follows:

2 CSR 10-4.010 Guidelines for the AgriMissouri Matching Fund Program is rescinded.

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on April 2, 2018 (43 MoReg 666-667). No changes have been made in the proposed rescission, so it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: No comments were received.

Title 2—DEPARTMENT OF AGRICULTURE Division 10—Market Development Chapter 5—Price Reporting

ORDER OF RULEMAKING

By the authority vested in the Missouri Department of Agriculture under sections 277.200-277.215, RSMo Repealed in 2007, SB613, the director rescinds a rule as follows:

2 CSR 10-5.010 Price Reporting Requirements for Livestock Purchases by Packers is rescinded.

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on April 2, 2018 (43 MoReg 667). No changes have been made in the proposed rescission, so it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: No comments were received.

Title 2—DEPARTMENT OF AGRICULTURE Division 10—Market Development Chapter 5—Price Reporting

ORDER OF RULEMAKING

By the authority vested in the Missouri Department of Agriculture under sections 277.200-277.215, RSMo Repealed in 2007, SB613, the director rescinds a rule as follows:

**2 CSR 10-5.015 Public Complaint Handling and Disposition
Procedure for Missouri Livestock Marketing Law is rescinded.**

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on April 2, 2018 (43 MoReg 667). No changes have been made in the proposed rescission, so it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: No comments were received.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 2—Air Quality Standards and Air Pollution
Control Rules Specific to the Kansas City Metropolitan
Area**

ORDER OF RULEMAKING

By the authority vested in the Missouri Air Conservation Commission under section 643.050, RSMo 2016, the commission rescinds a rule as follows:

**10 CSR 10-2.310 Control of Emissions From the Application of
Automotive Underbody Deadeners is rescinded.**

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on February 15, 2018 (43 MoReg 262). No changes were made in the proposed rescission, so it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: The Missouri Department of Natural Resources' Air Pollution Control Program (APCP) received five (5) comments on this rulemaking from the U.S. Environmental Protection Agency (EPA).

Due to the following five (5) comments all regarding suggestions for addressing antibacksliding, one (1) response can be found at the end of these five (5) comments.

COMMENT #1: EPA commented that the rule does not specifically say if it would or would not apply to a new or modified applicator of underbody deadener with potential emissions of Volatile Organic Compounds (VOCs) greater than one-hundred (100) tpy upon start-up.

COMMENT #2: EPA commented that a potential way for the department to demonstrate that this State Implementation Plan (SIP) revision would not interfere with attainment of the National Ambient Air Quality Standards might be to provide an explanation of how its SIP-approved Prevention of Significant Deterioration (PSD) program would ensure that the start-up of a new source or modification of an existing source would be controlled in at least an equivalent manner as would be required by this rescinded rule.

COMMENT #3: EPA commented that if in the event the start-up of a new source or modification to an existing source would not be applicable under PSD but would otherwise be an applicable source under this rescinded rule, the department should provide a demonstration of the potential emissions from such sources and make a determination about their potential impact on air quality.

COMMENT #4: EPA commented that the department could supplement this demonstration by providing information on why it believes no new or modified source will start-up (i.e., are underbody deadeners no longer sprayed onto vehicles? If still spray applied, do they no longer have VOCs?).

COMMENT #5: EPA noted that Maximum Available Control Technology (MACT) Subpart IIII for Surface Coating of Automobiles

and Light-Duty Trucks has provisions for underbody anti-chip coatings and deadeners which may provide a backstop. The department could demonstrate that the associated limits on hazardous air pollutants (HAPs) also limit VOCs. The department may want to evaluate further to see if this MACT rule could address the proposed rescission of this Reasonably Available Control Technology (RACT) rule. RESPONSE: The program's State Implementation Plan submission will provide discussion to support this rescission. No changes were made to this rule as a result of this comment.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 2—Air Quality Standards and Air Pollution
Control Rules Specific to the Kansas City Metropolitan
Area**

ORDER OF RULEMAKING

By the authority vested in the Missouri Air Conservation Commission under section 643.050, RSMo 2016, the commission rescinds a rule as follows:

**10 CSR 10-2.360 Control of Emissions From Bakery Ovens
is rescinded.**

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on February 15, 2018 (43 MoReg 262). No changes were made in the proposed rescission, so it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: The Missouri Department of Natural Resources' Air Pollution Control Program (APCP) received four (4) comments on this rulemaking from the U.S. Environmental Protection Agency (EPA).

Due to the similarity of the following four (4) comments, one (1) response can be found at the end of these four (4) comments.

COMMENT #1: EPA commented that the Rulemaking Report indicates that this rule only applied to one (1) source up promulgation, the Wonder Bread facility, and that source is no longer active. However, the rule does not name a specific facility. Furthermore, the rule applies to all installations which have the uncontrolled potential to emit (PTE) more than one-hundred (100) tons per year (tpy) or two-hundred fifty (250) kg per day of volatile organic compounds (VOCs), and that the rule shall apply to new or modified commercial bakeries whose potential emissions of VOCs are greater than one-hundred (100) tpy upon start-up. Since the rule language indicates that any commercial bakery oven source greater than one hundred (100) tpy of VOCs are subject to this rule and the Rulemaking Report only names the existing source at the time of the rule, the department should clearly state that no other sources were subject to this rule at any time and thus all potential emissions impact from affected facilities have been taken into consideration.

COMMENT #2: EPA commented that a potential way for the department to demonstrate that this State Implementation Plan (SIP) revision would not interfere with attainment of the National Ambient Air Quality Standards (NAAQS) might be to provide an explanation of how its SIP-approved Prevention of Significant Deterioration (PSD) program would ensure that the start-up of a new source or modification of an existing source would be controlled in at least an equivalent manner as would be required by this rescinded rule.

COMMENT #3: EPA commented that if in the event the start-up of a new source or modification to an existing source would not be applicable under PSD but would otherwise be an applicable source under this rescinded rule, the department should provide a demonstration of the

potential emissions from such sources and make a determination about their potential impact on air quality.

COMMENT #4: EPA commented that the department could supplement this demonstration by providing information on why it believes no new or modified source will start-up (i.e., Is there new technology such that commercial bakery ovens no longer emit VOC levels that would trigger this rule?).

RESPONSE: The program's State Implementation Plan submission will provide discussion to support this rescission. No changes were made to this rule as a result of this comment.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 3—Air Pollution Control Rules Specific to the
Outstate Missouri Area

ORDER OF RULEMAKING

By the authority vested in the Missouri Air Conservation Commission under section 643.050, RSMo 2016, the commission rescinds a rule as follows:

10 CSR 10-3.160 Restriction of Emission of Fluorides From
Diammonium Phosphate Fertilizer Production is rescinded.

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on February 15, 2018 (43 MoReg 262–263). No changes were made in the proposed rescission, so it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: The Missouri Department of Natural Resources' Air Pollution Control Program (APCP) received a total of one (1) comment from one (1) source: The U.S. Environmental Protection Agency (EPA).

COMMENT #1: EPA commented that this rule is approved into the state's Clean Air Act (CAA) 111(d) plan and as such is not subject to the anti-backsliding requirements of CAA 110(l) and 193. However, the Rulemaking Report does not specify how the removal of this rule would or would not impact its 111(d) plan. We recommend some description of how the rescission of this rule would not hamper the state's ability to implement or reduce the effectiveness of the state's 111(d) plan.

RESPONSE: The program's plan submission will include the negative declaration previously approved for this rescission. No changes were made to the rule as a result of this comment.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 5—Air Quality Standards and Air Pollution
Control Rules Specific to the St. Louis Metropolitan Area

ORDER OF RULEMAKING

By the authority vested in the Missouri Air Conservation Commission under section 643.050, RSMo 2016, the commission rescinds a rule as follows:

10 CSR 10-5.120 Information on Sales of Fuels to be Provided and
Maintained is rescinded.

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on February 15, 2018 (43 MoReg 263). No changes were made in the proposed rescission, so

it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: The Missouri Department of Natural Resources' Air Pollution Control Program (APCP) received a total of one (1) comment from one (1) source: The U.S. Environmental Protection Agency (EPA).

COMMENT #1: EPA commented that the Rulemaking Report indicates that this rule is obsolete due to other federal and state regulations that control emissions rather than fuels. In addition, the intent of the rule is focused on record keeping and tracking of fuel oil sales and ash content of coal sales. The EPA recognizes that this rule does not control emissions; however, the department could provide information regarding the specific federal and state rules as referenced in the Rulemaking Report that have replaced the need for this rule and indicate that there are record keeping requirements as part of those rules.

RESPONSE: The program's State Implementation Plan submission will provide discussion to support the information provided in the Rulemaking Report. No changes were made to this rule as a result of this comment.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 5—Air Quality Standards and Air Pollution
Control Rules Specific to the St. Louis Metropolitan Area

ORDER OF RULEMAKING

By the authority vested in the Missouri Air Conservation Commission under section 643.050, RSMo 2016, the commission rescinds a rule as follows:

10 CSR 10-5.130 Certain Coals to be Washed is rescinded.

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on February 15, 2018 (43 MoReg 263–264). No changes were made in the proposed rescission, so it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: The Missouri Department of Natural Resources' Air Pollution Control Program (APCP) received two (2) comments from one (1) source: The U.S. Environmental Protection Agency (EPA).

Due to the following two (2) comments all regarding suggestions for supporting why the rescission does not impact the stringency of the State Implementation Plan, one (1) response can be found at the end of these two (2) comments.

COMMENT #1: EPA commented that the Rulemaking Report indicates that this rule is obsolete because provisions of three (3) other rules taken together (10 CSR 10-6.261 Control of Sulfur Dioxide Emissions; 10 CSR 10-5.570 Control of Sulfur Emissions From Stationary Boilers; and 10 CSR 10-6.405 Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used for Indirect Heating) effectively limit the Sulfur Dioxide (SO₂) and particulate matter (PM) emissions from coal-burning sources statewide. We recommend that the department demonstrate how these state rules limit SO₂ and PM emissions in an equivalent or greater manner than the rule being rescinded. If in the event an applicability coverage gap exists the department should describe the gap between sources that were covered under 10 CSR 10-5.130 and the sources that are subject to the current rules which the state is relying upon, and describe how these sources, such as minor sources would be controlled, or that the

potential emissions from these sources uncontrolled would have a negligible impact on air quality overall. EPA notes that 10 CSR 10-6.261 is not State Implementation Plan (SIP) approved.

COMMENT #2: EPA commented that if applicable, the department could describe whether there are any federal or other requirements that limit the ash content of coal such that the rescission of this rule would not impact the stringency of the SIP.

RESPONSE: The program's SIP submission will provide discussion to support that the rescission of the rule will not impact the stringency of the SIP. No changes were made to this rule as a result of this comment.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 5—Air Quality Standards and Air Pollution
Control Rules Specific to the St. Louis Metropolitan Area

ORDER OF RULEMAKING

By the authority vested in the Missouri Air Conservation Commission under section 643.050, RSMo 2016, the commission rescinds a rule as follows:

10 CSR 10-5.450 Control of VOC Emissions from Traffic Coatings is rescinded.

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on February 15, 2018 (43 MoReg 264). No changes were made in the proposed rescission, so it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: The Missouri Department of Natural Resources' Air Pollution Control Program received two (2) comments from two (2) sources: The Boeing Company and the U.S. Environmental Protection Agency (EPA).

COMMENT #1: The Boeing Company spoke in favor of the rule rescission. Since the federal rule became effective in 1998, Boeing is now confident that any paving contractor that Boeing uses cannot buy noncompliant coating anymore. The elimination of the state rule will unclutter our Title V permit compliance certification.

RESPONSE: The program appreciates Boeing's support of the rescission. No change was made to the rule as a result of this comment.

COMMENT #2: The EPA provided suggestions and comments to help ensure that any State Implementation Plan submission meets the requirements of Section 110(l) and 193 of the Clean Air Act. EPA commented that while the one hundred fifty (150) gram limit on the volatile organic compound content of manufactured traffic coating is identical for the federal rule 40 CFR Part 59, Subpart D and the proposed rule rescission, that the Missouri Department of Natural Resources should also compare the applicability, the labeling requirements, and test method requirements of the rules.

RESPONSE: The program performed a review and comparison of the state rule and federal rule prior to proposing the rule rescission and found that the rules were nearly identical. The program's State Implementation Plan submission will provide discussion to support that any differences between the two (2) rules would not interfere with the attainment of the National Ambient Air Quality Standards, Rate of Progress, Reasonable Further Progress, or any other applicable requirement of the Clean Air Act. No change was made to the rule as a result of this comment.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 6—Air Quality Standards, Definitions, Sampling
and Reference Methods and Air Pollution Control
Regulations for the Entire State of Missouri

ORDER OF RULEMAKING

By the authority vested in the Missouri Air Conservation Commission under section 643.050, RSMo 2016, the commission rescinds a rule as follows:

10 CSR 10-6.100 Alternate Emission Limits is rescinded.

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on February 15, 2018 (43 MoReg 264). No changes were made in the proposed rescission, so it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: The Missouri Department of Natural Resources' Air Pollution Control Program (APCP) received one (1) comment on this rulemaking from the U.S. Environmental Protection Agency (EPA).

COMMENT #1: EPA commented that this rule was not approved into the Missouri State Implementation Plan and they do not see any issue with its rescission.

RESPONSE: The program appreciates the comment provided by EPA.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 6—Air Quality Standards, Definitions, Sampling
and Reference Methods and Air Pollution Control
Regulations for the Entire State of Missouri

ORDER OF RULEMAKING

By the authority vested in the Missouri Air Conservation Commission under section 643.050, RSMo 2016, the commission rescinds a rule as follows:

10 CSR 10-6.350 Emission Limitations and Emissions Trading of Oxides of Nitrogen is rescinded.

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on February 15, 2018 (43 MoReg 265). No changes were made in the proposed rescission, so it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: The Missouri Department of Natural Resources' Air Pollution Control Program (APCP) received one (1) comment on this rulemaking from the U.S. Environmental Protection Agency (EPA).

COMMENT #1: EPA commented that the State Implementation Plan revision submission for this rescission should discuss how these rules were relied upon in the Department's maintenance plan for the 1997 annual fine particulate matter standards (PM_{2.5}) and any potential impact of rescinding the rules on that plan.

RESPONSE: The program's State Implementation Plan submission will provide discussion on how this rule was relied upon in the maintenance plan for the 1997 PM_{2.5} standard and the potential effect of rescinding this rule. No change was made to the rule as a result of this comment.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 6—Air Quality Standards, Definitions, Sampling
and Reference Methods and Air Pollution Control
Regulations for the Entire State of Missouri

ORDER OF RULEMAKING

By the authority vested in the Missouri Air Conservation Commission under section 643.050, RSMo 2016, the commission rescinds a rule as follows:

**10 CSR 10-6.360 Control of NO_x Emissions From Electric
Generating Units and Non-Electric Generating Boilers**
is rescinded.

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on February 15, 2018 (43 MoReg 265). No changes were made in the proposed rescission, so it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: The Missouri Department of Natural Resources' Air Pollution Control Program (APCP) received one (1) comment on this rulemaking from the U.S. Environmental Protection Agency (EPA).

COMMENT#1: EPA commented that the State Implementation Plan revision submission for this rescission should discuss how these rules were relied upon in the department's maintenance plan for the 1997 annual fine particulate matter standards (PM_{2.5}) and any potential impact of rescinding the rules on that plan. In addition, the EPA suggests the department provide a short narrative regarding the status of the three (3) affected non-electric generating unit (EGU) sources of 10 CSR 10-6.360 that were not included in the applicability of the federal Cross-State Air Pollution Rule.

RESPONSE: The program's State Implementation Plan (SIP) submission will provide discussion on how this rule was relied upon in the maintenance plan for the 1997 PM_{2.5} standard and the potential effect of rescinding this rule. The program's SIP submission will also provide the current status of the non-EGU sources that were subject to this rule when the Missouri SIP is amended. No change was made to the rule as a result of this comment.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 20—Clean Water Commission
Chapter 1—Organization

ORDER OF RULEMAKING

By the authority vested in the Clean Water Commission of the State of Missouri under sections 536.023(3) and 644.026, RSMo 2016, the commission rescinds a rule as follows:

10 CSR 20-1.010 Organization and Powers is rescinded.

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on February 1, 2018 (43 MoReg 134). No changes have been made in the proposed rescission, so it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: A public hearing on this proposed rescission was held March 14, 2018, and the public comment period ended March 21, 2018. At the public hearing, department staff explained the proposed rescission. No comments were made during

the public hearing. The department received one (1) comment from one (1) individual during the public comment period.

PUBLIC COMMENTS:

COMMENT #1: Robert Brundage, Newman, Comley and Ruth, P.C., commented on the rescission of 10 CSR 20-1.010. He opposed rescission of this rule, arguing that the rule should not be rescinded until the proposed replacement for the rule is proposed for promulgation in the same *Missouri Register* as a proposed rescission of 10 CSR 20-1.010. That way there is no gap in the regulation. Furthermore, he stated the public can then comment on whether the proposed department-wide organizational rule adequately replaces 10 CSR 20-1.010 and the other regulation proposed for rescission.

RESPONSE: The purpose of this rulemaking is to rescind this rule as it is to be replaced by a department-wide organizational rule to comply with section 536.023, RSMo. The replacement rule will be more department-specific including all the boards and commissions that support and facilitate the department's roles and responsibilities. This will allow for a more streamlined and efficient approach for a department-wide organization of powers. The proposed draft rule language for the Departmental Organization Rule will be 10 CSR 1-1.010; this rule is intended to replace individual program organizational rules which are being proposed for rescission. The rule language has been filed and was published in the April 2, 2018, *Missouri Register*. Any gap in time between the rescission and the effective date of the new organizational rule will have no practical effect on regulated entities. No changes were made as a result of this comment.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 20—Clean Water Commission
Chapter 1—Organization

ORDER OF RULEMAKING

By the authority vested in the Clean Water Commission of the State of Missouri under sections 536.023(3) and 644.026, RSMo 2016, the commission rescinds a rule as follows:

**10 CSR 20-1.020 Clean Water Commission Appeals and Requests
for Hearings is rescinded.**

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on February 1, 2018 (43 MoReg 135). No changes have been made in the proposed rescission, so it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: A public hearing on this proposed rescission was held March 14, 2018, and the public comment period ended March 21, 2018. At the public hearing, department staff explained the proposed rescission. No comments were made during the public hearing. The department received one (1) comment from one (1) individual during the public comment period.

PUBLIC COMMENTS:

COMMENT #1: Robert Brundage, Newman, Comley and Ruth, P.C., commented on the rescission of 10 CSR 20-1.020. He opposed rescission of this rule and stated the rule should be retained even though it is duplicative of statute regarding appeals and contested cases.

RESPONSE: Section 621.250, RSMo, and Chapter 536, RSMo, clearly define appeal procedures. The rule is duplicative of statute. No changes were made as a result of this comment.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 20—Clean Water Commission
Chapter 4—Grants and Loans**

ORDER OF RULEMAKING

By the authority vested in the Clean Water Commission under section 644.026, RSMo 2016, the commission rescinds a rule as follows:

10 CSR 20-4.020 State Match Grant Program is rescinded.

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on February 1, 2018 (43 MoReg 135). No changes have been made in the proposed rescission, so it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: A public hearing on this proposed rescission was held March 14, 2018, and the public comment period ended March 21, 2018. At the public hearing, the department's financial assistance center staff explained the proposed rescission. No comments were received.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 20—Clean Water Commission
Chapter 4—Grants and Loans**

ORDER OF RULEMAKING

By the authority vested in the Clean Water Commission under section 644.026, RSMo 2016, the commission rescinds a rule as follows:

10 CSR 20-4.021 State Construction Grant Program is rescinded.

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on February 1, 2018 (43 MoReg 135). No changes have been made in the proposed rescission, so it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: A public hearing on this proposed rescission was held March 14, 2018, and the public comment period ended March 21, 2018. At the public hearing, the department's financial assistance center staff explained the proposed rescission. No comments were received.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 20—Clean Water Commission
Chapter 4—Grants and Loans**

ORDER OF RULEMAKING

By the authority vested in the Clean Water Commission under section 644.026, RSMo 2016, the commission rescinds a rule as follows:

10 CSR 20-4.022 Industrial Development Program is rescinded.

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on February 1, 2018 (43 MoReg 135-136). No changes have been made in the proposed rescission, so it is not reprinted here. This proposed rescission

becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: A public hearing on this proposed rescission was held March 14, 2018, and the public comment period ended March 21, 2018. At the public hearing, the department's financial assistance center staff explained the proposed rescission. No comments were received.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 20—Clean Water Commission
Chapter 4—Grants and Loans**

ORDER OF RULEMAKING

By the authority vested in the Clean Water Commission under section 644.026, RSMo 2016, the commission rescinds a rule as follows:

10 CSR 20-4.043 Hardship Grant Program is rescinded.

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on February 1, 2018 (43 MoReg 136). No changes have been made in the proposed rescission, so it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: A public hearing on this proposed rescission was held March 14, 2018, and the public comment period ended March 21, 2018. At the public hearing, the department's financial assistance center staff explained the proposed rescission. No comments were received.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 20—Clean Water Commission
Chapter 4—Grants and Loans**

ORDER OF RULEMAKING

By the authority vested in the Clean Water Commission under section 644.026, RSMo 2016, the commission rescinds a rule as follows:

10 CSR 20-4.049 State Match to State Revolving Fund Loan Program is rescinded.

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on February 1, 2018 (43 MoReg 136). No changes have been made in the proposed rescission, so it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: A public hearing on this proposed rescission was held March 14, 2018, and the public comment period ended March 21, 2018. At the public hearing, the department's financial assistance center staff explained the proposed rescission. No comments were received.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 20—Clean Water Commission
Chapter 4—Grants and Loans**

ORDER OF RULEMAKING

By the authority vested in the Clean Water Commission under section

644.026, RSMo 2016, the commission rescinds a rule as follows:

**10 CSR 20-4.060 Storm Water Assistance Regulation
is rescinded.**

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on February 1, 2018 (43 MoReg 136-137). No changes have been made in the proposed rescission, so it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: A public hearing on this proposed rescission was held March 14, 2018, and the public comment period ended March 21, 2018. At the public hearing, the department's financial assistance center staff explained the proposed rescission. No comments were received.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 20—Clean Water Commission
Chapter 4—Grants and Loans**

ORDER OF RULEMAKING

By the authority vested in the Clean Water Commission under section 644.026, RSMo 2016, the commission rescinds a rule as follows:

10 CSR 20-4.070 Sales Tax Exemption is rescinded.

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on February 1, 2018 (43 MoReg 137). No changes have been made in the proposed rescission, so it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: A public hearing on this proposed rescission was held March 14, 2018, and the public comment period ended March 21, 2018. At the public hearing, the department's financial assistance center staff explained the proposed rescission. No comments were received.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 60—Safe Drinking Water Commission
Chapter 1—Organization**

ORDER OF RULEMAKING

By the authority vested in the Safe Drinking Water Commission under section 640.100, RSMo 2016, the commission rescinds a rule as follows:

**10 CSR 60-1.010 Public Drinking Water Program—Description of
Organization and Methods of Operation is rescinded.**

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on February 1, 2018 (43 MoReg 139-140). No changes have been made in the proposed rescission, so it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: A public hearing on this proposed rescission was held March 20, 2018, and the public comment period ended March 28, 2018. At the public hearing, department staff explained the proposed rescission and no comments were received.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 60—Safe Drinking Water Commission
Chapter 4—Contaminant Levels and Monitoring**

ORDER OF RULEMAKING

By the authority vested in the Safe Drinking Water Commission under section 640.100, RSMo 2016, the commission rescinds a rule as follows:

**10 CSR 60-4.020 Maximum Microbiological Contaminant Levels
and Monitoring Requirements is rescinded.**

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on February 1, 2018 (43 MoReg 140). No changes have been made in the proposed rescission, so it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: A public hearing on this proposed rescission was held March 20, 2018, and the public comment period ended March 28, 2018. At the public hearing, department staff explained the proposed rescission and no comments were received.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 60—Safe Drinking Water Commission
Chapter 4—Contaminant Levels and Monitoring**

ORDER OF RULEMAKING

By the authority vested in the Safe Drinking Water Commission under section 640.100, RSMo 2016, the commission rescinds a rule as follows:

**10 CSR 60-4.092 Initial Distribution System Evaluation
is rescinded.**

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on February 1, 2018 (43 MoReg 140). No changes have been made in the proposed rescission, so it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: A public hearing on this proposed rescission was held March 20, 2018, and the public comment period ended March 28, 2018. At the public hearing, department staff explained the proposed rescission and no comments were received.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 60—Safe Drinking Water Commission
Chapter 4—Contaminant Levels and Monitoring**

ORDER OF RULEMAKING

By the authority vested in the Safe Drinking Water Commission under section 640.100, RSMo 2016, the commission rescinds a rule as follows:

**10 CSR 60-4.110 Special Monitoring for Unregulated Chemicals
is rescinded.**

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on February 1, 2018 (43 MoReg 140). No changes have been made in the proposed rescission,

so it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: A public hearing on this proposed rescission was held March 20, 2018, and the public comment period ended March 28, 2018. At the public hearing, department staff explained the proposed rescission and no comments were received.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 100—Petroleum Storage Tank Insurance Fund
Board of Trustees
Chapter 2—Definitions**

ORDER OF RULEMAKING

By the authority vested in the Petroleum Storage Tank Insurance Fund Board of Trustees under section 319.129, RSMo 2016, the board amends a rule as follows:

10 CSR 100-2.010 is amended.

A notice of proposed rulemaking containing the text of the proposed amendment was published in the *Missouri Register* on March 15, 2018 (43 MoReg 534–535). Those sections with changes are reprinted here. This proposed amendment becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: The board received one (1) comment on the proposed amendment, and its staff identified one (1) redundancy in the proposed amendment.

COMMENT #1: The Department of Natural Resources objected to the definition of “contaminated” or “contamination” and suggested no definition of those terms be added.

RESPONSE AND EXPLANATION OF CHANGE: The board is postponing the addition of a definition for these terms until a later date. This requires renumbering of definitions currently numbered (8) through (24).

COMMENT #2: Staff of the Petroleum Storage Tank Insurance Fund Board of Trustees observed the proposed new definition of “petroleum storage tank” or “tank” was redundant, since “tank” was already defined in the rule. The redundant language is being eliminated.

RESPONSE AND EXPLANATION OF CHANGE: The board concurs and has deleted the redundant words.

10 CSR 100-2.010 Definitions

(8) “Deductible” means that portion of a covered loss borne by a fund participant for each occurrence before the participant is entitled to recovery from the fund for that occurrence.

(9) “Emergency response” means immediate actions taken to contain a release or eliminate a serious hazard.

(10) “Fund” means the Petroleum Storage Tank Insurance Fund.

(11) “Fund beneficiary” means any person who takes responsibility for cleanup of one (1) or more releases from tanks taken out of use prior to December 31, 1997, and who qualifies to receive monies from the Petroleum Storage Tank Insurance Fund under section 319.131.9 or 319.131.10, RSMo.

(12) “Fund participant” means an owner or operator of a tank who has applied for and been accepted by the board as a person for whom the Petroleum Storage Tank Insurance Fund is serving as a financial responsibility mechanism under section 319.114, RSMo, or section

414.036, RSMo; or the owner of land upon which such a tank is located, if such person is named as an additional insured; or any other person named as an additional insured by the board.

(13) “In use” means the tank contains an accumulation of petroleum which is more than a *de minimus* amount; that is, the tank is not empty.

(14) “Marine terminal” means a large storage facility which receives product via barge or similar conveyance. It does not mean bulk storage facilities located near lakes or rivers, such as are used by petroleum distributors, and which typically receive product via truck.

(15) “Occurrence” means any sudden or nonsudden accidental release of petroleum from a tank that results in a covered loss.

(16) “Out of use” means the tank is empty—that is, it does not contain more than a *de minimus* amount of petroleum—and is no longer regularly being used to store petroleum.

(17) “Personal injury” means injury, other than bodily injury, arising out of one (1) or more of the following offenses:

- (A) False arrest, detention, imprisonment;
- (B) Malicious prosecution;
- (C) Wrongful entry into or eviction of a person from a room, dwelling, premises, or property that the person occupies; or
- (D) Invasion of right of private occupancy.

(18) “Petroleum storage tank” means:

- (A) An underground storage tank, as defined in section 319.100, RSMo, which is used to store petroleum; or
- (B) An aboveground storage tank, as defined in this rule.

(19) “Pipeline terminal” means a large storage facility which receives product via pipeline.

(20) “Property damage” means physical injury to or destruction of tangible property, excluding all resulting loss of use of that property. It does not include loss or damage of an intangible nature. Loss or damage of an intangible nature includes, but is not limited to, loss or interruption of business, pain and suffering, lost income, mental distress, loss of use of any benefit, and punitive damages.

(21) “Railroad corporation” means all corporations, companies or individuals now owning or operating, or which may hereafter own or operate, any railroad in this state.

(22) “Release” includes, but is not limited to, any spilling, leaking, emitting, discharging, escaping, leaching, or disposing from a petroleum storage tank into groundwater, surface water, or subsurface soils.

(23) “Site” means real property held under one (1) deed, except that in exceptional circumstances involving very large tracts of land, the board may, at its discretion, recognize separate portions of a large tract as separate tank sites.

(24) “Tank” means—

- (A) An underground storage tank, as defined in section 319.100, RSMo, which is used to store petroleum; or
- (B) An aboveground storage tank, as defined in this rule.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 100—Petroleum Storage Tank Insurance Fund
Board of Trustees
Chapter 4—Participation Requirements**

ORDER OF RULEMAKING

By the authority vested in the Petroleum Storage Tank Insurance

Fund Board of Trustees under sections 319.129, 319.131, and 319.133, RSMo 2016, the board amends a rule as follows:

10 CSR 100-4.010 is amended.

A notice of proposed rulemaking containing the text of the proposed amendment was published in the *Missouri Register* on March 15, 2018 (43 MoReg 535-540). Those sections with changes are reprinted here. This proposed amendment becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: The board received four (4) comments on the proposed amendment.

COMMENT #1: The Department of Natural Resources suggested the board's amended language allowing more flexibility in its review of leak detection records could affect the department's reliance on the board's review to meet the UST owner/operator's compliance obligations.

RESPONSE AND EXPLANATION OF CHANGE: The board's proposed amendment was intended to allow the board more flexibility to insure owners; it was not intended to change current practices. After discussion with the Department of Natural Resources, compromise language is being inserted in an effort to preserve the board's desired flexibility while alleviating the department's concern.

COMMENT #2: Don McNutt, President of Midwest Petroleum Company, opposed the board's proposal to increase the participation fee for underground tanks forty (40) years old or older.

RESPONSE AND EXPLANATION OF CHANGE: The board decided not to increase the fee.

COMMENT #3: Don McNutt, President of Midwest Petroleum Company, questioned why procedures were being changed when a landowner changes, but after receiving an explanation, indicated no opposition to the proposal.

RESPONSE: No change made.

COMMENT #4: The Department of Natural Resources opposed the amended language clarifying what contractual terms and conditions remain in effect when coverage for UST owners/operators is renewed.

RESPONSE AND EXPLANATION OF CHANGE: The board believes the proposed amendment makes the rule more explicit and internally consistent; however, it agrees that, as proposed, the language created unintended uncertainty as to whether the board was retaining its authority to amend its participation agreement. After discussion with the department, language to avoid this misunderstanding and clarify its intent is being added.

10 CSR 100-4.010 Participation Requirements for Underground Storage Tanks

(2) Any owner or operator who wishes to participate in the fund shall so indicate by applying for coverage on a form specified by the board. An application shall—

(D) Include documentation as required by the board to demonstrate that the applicant has a reasonable assurance of the integrity of all USTs on the site which are in use. This documentation shall include:

1. Monthly leak detection records, except in the following cases:

A. For USTs installed before July 1, 2017, or compartments of such tanks, which are being put into use for the first time, current tank and line tightness tests shall be provided;

B. For UST systems being put back into use after being out of use, current tank and line tightness tests shall be provided; and

C. For operating UST systems being purchased by a new owner, current tank and line tightness tests shall be provided if at least two (2) current months' leak detection records are not available

from the prior owner;

2. Evidence that pressurized lines are equipped with line leak detectors which are in working order, unless the entire UST system is a double-wall system and monitoring devices are adequate to detect a leak;

3. Evidence that the cathodic protection system, if any, is functioning properly;

4. Evidence that the tank lining, if any, has been properly installed and inspected according to accepted industry practices;

5. Evidence that the UST is equipped with corrosion protection and spill/overflow prevention devices, as required in 10 CSR 26-2;

6. Line and/or tank tightness tests, as required in 10 CSR 26-2; and

7. Any other documentation as may reasonably be required by the board;

(3) Procedures Regarding Payment of Fees.

(A) Participation fees shall be paid by all applicants, as follows:

1. For double-walled USTs – one hundred dollars (\$100) per tank annually; and

2. For all other USTs – one hundred twenty-five dollars (\$125) per tank annually.

(6) In order to continue their participation in the fund, participants are required to renew their participation annually.

(D) Upon determination that the participant has met the requirements for continued participation in the fund, the board shall issue a new declarations page confirming that fact and specifying the effective date(s) of coverage. Other terms and conditions of such coverage contained in the participation agreement previously issued for that site shall remain in effect for the new coverage period unless the board amends the terms and conditions in writing.

REVISED PUBLIC COST: The board's cost to modify its software will be less than the six thousand dollars (\$6,000) originally estimated, since no change is being made to its participation fees.

REVISED PRIVATE COST: Owners of USTs 40+ years old will not incur the increased costs estimated in the fiscal note submitted with the original proposal.

**REVISED FISCAL NOTE
PUBLIC COST**

- I.** **Department Title:** Department of Natural Resources
 Division Title: Petroleum Storage Tank Insurance Fund Board of Trustees
 Chapter Title: Participation Requirements

Rule Number and Name:	10 CSR 100-4.010 UST Participation Requirements
Type of Rulemaking:	Final Order of Rulemaking

II. SUMMARY OF FISCAL IMPACT

Affected Agency or Political Subdivision	Estimated Cost of Compliance in the Aggregate
Petroleum Storage Tank Insurance Fund Board of Trustees	\$1,000

III. WORKSHEET

Cost is a onetime expense to modify PSTIF Board of Trustees' software so endorsement can be issued when new tank is added to participation agreement.

IV. ASSUMPTIONS

IT contractor has committed to make these programming changes for these not-to-exceed costs.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 100—Petroleum Storage Tank Insurance Fund
Board of Trustees
Chapter 4—Participation Requirements**

ORDER OF RULEMAKING

By the authority vested in the Petroleum Storage Tank Insurance Fund Board of Trustees under sections 319.129, 319.131, and 319.133, RSMo 2016, the board amends a rule as follows:

10 CSR 100-4.020 is amended.

A notice of proposed rulemaking containing the text of the proposed amendment was published in the *Missouri Register* on March 15, 2018 (43 MoReg 541–544). Those sections with changes are reprinted here. This proposed amendment becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: The board received one (1) comment on the proposed amendment.

COMMENT #1: The Department of Natural Resources opposed the amended language clarifying what contractual terms and conditions remain in effect when coverage for UST owners/operators is renewed.

RESPONSE AND EXPLANATION OF CHANGE: The board believes the proposed amendment makes the rule more explicit and internally consistent; however, it agrees that, as proposed, the language created unintended uncertainty as to whether the board was retaining its authority to amend its participation agreement. After discussion with the department, language to avoid this misunderstanding and clarify its intent is being added.

10 CSR 100-4.020 Participation Requirements for Aboveground Storage Tanks

(6) In order to continue participation in the fund, participants are required to renew their participation annually.

(E) Upon determination that the participant has met the requirements for continued participation in the fund, the board shall issue a new declarations page confirming that fact and specifying the effective date(s) of coverage. Other terms and conditions of such coverage contained in the participation agreement previously issued for that site shall remain in effect for the new coverage period unless the board amends the terms and conditions in writing.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 100—Petroleum Storage Tank Insurance Fund
Board of Trustees
Chapter 5—Claims**

ORDER OF RULEMAKING

By the authority vested in the Petroleum Storage Tank Insurance Fund Board of Trustees under sections 319.129 and 319.131, RSMo 2016, the board amends a rule as follows:

10 CSR 100-5.010 Claims for Cleanup Costs is amended.

A notice of proposed rulemaking containing the text of the proposed amendment was published in the *Missouri Register* on March 15, 2018 (43 MoReg 545–546). No changes have been made in the text of the proposed amendment, so it is not reprinted here. This proposed amendment becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: No comments were received.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 100—Petroleum Storage Tank Insurance Fund
Board of Trustees
Chapter 5—Claims**

ORDER OF RULEMAKING

By the authority vested in the Petroleum Storage Tank Insurance Fund Board of Trustees under sections 319.129 and 319.131, RSMo 2016, the board amends a rule as follows:

10 CSR 100-5.030 Third-Party Claims is amended.

A notice of proposed rulemaking containing the text of the proposed amendment was published in the *Missouri Register* on March 15, 2018 (43 MoReg 546). No changes have been made in the text of the proposed amendment, so it is not reprinted here. This proposed amendment becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: No comments were received.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 100—Petroleum Storage Tank Insurance Fund
Board of Trustees
Chapter 6—UST Operator Training**

ORDER OF RULEMAKING

By the authority vested in the Petroleum Storage Tank Insurance Fund Board of Trustees under section 319.130, RSMo 2016, the board amends a rule as follows:

10 CSR 100-6.010 UST Operator Training is amended.

A notice of proposed rulemaking containing the text of the proposed amendment was published in the *Missouri Register* on March 15, 2018 (43 MoReg 546). No changes have been made in the text of the proposed amendment, so it is not reprinted here. This proposed amendment becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: No comments were received.

**Title 11—DEPARTMENT OF PUBLIC SAFETY
Division 75—Peace Officer Standards and Training
Program
Chapter 15—Continuing Education**

ORDER OF RULEMAKING

By the authority vested in the Department of Public Safety under sections 590.030.5(1), 590.050, and 590.190, RSMo 2016, the director amends a rule as follows:

11 CSR 75-15.010 Continuing Education Requirement is amended.

A notice of proposed rulemaking containing the text of the proposed amendment was published in the *Missouri Register* on April 16, 2018 (43 MoReg 775–776). No changes have been made in the text of the proposed amendment, so it is not reprinted here. This proposed amendment becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: No comments were received.

**Title 11—DEPARTMENT OF PUBLIC SAFETY
Division 75—Peace Officer Standards and Training
Program
Chapter 15—Continuing Education**

ORDER OF RULEMAKING

By the authority vested in the Department of Public Safety under sections 590.030.5(1), 590.050, and 590.190, RSMo 2016, the director amends a rule as follows:

11 CSR 75-15.020 Minimum Standards of Continuing Education Training **is amended.**

A notice of proposed rulemaking containing the text of the proposed amendment was published in the *Missouri Register* on April 16, 2018 (43 MoReg 776-777). No changes have been made in the text of the proposed amendment, so it is not reprinted here. This proposed amendment becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: No comments were received.

**Title 11—DEPARTMENT OF PUBLIC SAFETY
Division 75—Peace Officer Standards and Training
Program
Chapter 15—Continuing Education**

ORDER OF RULEMAKING

By the authority vested in the Department of Public Safety under sections 590.030.5(1), 590.050, and 590.190, RSMo 2016, the director adopts a rule as follows:

11 CSR 75-15.080 Failure to Obtain Continuing Education Training **is adopted.**

A notice of proposed rulemaking containing the text of the proposed rule was published in the *Missouri Register* on April 16, 2018 (43 MoReg 777-778). No changes have been made in the text of the proposed rule, so it is not reprinted here. This proposed rule becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: No comments were received.

**Title 20—DEPARTMENT OF INSURANCE,
FINANCIAL INSTITUTIONS AND PROFESSIONAL
REGISTRATION
Division 2085—Board of Cosmetology and Barber
Examiners
Chapter 14—Violations and Hearings**

ORDER OF RULEMAKING

By the authority vested in the Board of Cosmetology and Barber Examiners under sections 328.150, 328.160, 329.025.1, 329.140, 329.250, and 329.255, RSMo 2016, the board rescinds a rule as follows:

20 CSR 2085-14.010 Violations **is rescinded.**

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on April 16, 2018 (43 MoReg 780). No changes have been made in the proposed rescission, so it is not reprinted here. This proposed rescission becomes effective thirty

(30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: No comments were received.

**Title 20—DEPARTMENT OF INSURANCE,
FINANCIAL INSTITUTIONS AND PROFESSIONAL
REGISTRATION
Division 2085—Board of Cosmetology and Barber
Examiners
Chapter 14—Violations and Hearings**

ORDER OF RULEMAKING

By the authority vested in the Board of Cosmetology and Barber Examiners under sections 329.025.7 and 621.045.1, RSMo 2016, the board rescinds a rule as follows:

20 CSR 2085-14.020 Hearings and Review **is rescinded.**

A notice of proposed rulemaking containing the proposed rescission was published in the *Missouri Register* on April 16, 2018 (43 MoReg 780). No changes have been made in the proposed rescission, so it is not reprinted here. This proposed rescission becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: No comments were received.

**Title 20—DEPARTMENT OF INSURANCE,
FINANCIAL INSTITUTIONS AND PROFESSIONAL
REGISTRATION
Division 2245—Real Estate Appraisers
Chapter 5—Fees**

ORDER OF RULEMAKING

By the authority vested in the Real Estate Appraisers Commission under sections 339.509, 339.513, and 339.525.4, RSMo 2016, the commission amends a rule as follows:

20 CSR 2245-5.020 Application, Certificate and License Fees **is amended.**

A notice of proposed rulemaking containing the text of the proposed amendment was published in the *Missouri Register* on April 16, 2018 (43 MoReg 780-783). No changes have been made in the text of the proposed amendment, so it is not reprinted here. This proposed amendment becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: No comments were received.

**Title 20—DEPARTMENT OF INSURANCE,
FINANCIAL INSTITUTIONS AND PROFESSIONAL
REGISTRATION
Division 2255—Missouri Board for Respiratory Care
Chapter 1—General Rules**

ORDER OF RULEMAKING

By the authority vested in the Missouri Board for Respiratory Care under sections 334.800, 334.830, 334.840, and 334.850, RSMo 2016, the board amends a rule as follows:

20 CSR 2255-1.010 Board Information—General Organization **is amended.**

A notice of proposed rulemaking containing the text of the proposed amendment was published in the *Missouri Register* on April 16, 2018 (43 MoReg 784). No changes have been made in the text of the proposed amendment, so it is not reprinted here. This proposed amendment becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: No comments were received.

**Title 20—DEPARTMENT OF INSURANCE,
FINANCIAL INSTITUTIONS AND PROFESSIONAL
REGISTRATION**

**Division 2255—Missouri Board for Respiratory Care
Chapter 1—General Rules**

ORDER OF RULEMAKING

By the authority vested in the Missouri Board for Respiratory Care under sections 334.800, 334.840, 334.850, and 610.010–610.200, RSMo 2016, the board amends a rule as follows:

**20 CSR 2255-1.020 Policy for Release of Public Records
is amended.**

A notice of proposed rulemaking containing the text of the proposed amendment was published in the *Missouri Register* on April 16, 2018 (43 MoReg 784). No changes have been made in the text of the proposed amendment, so it is not reprinted here. This proposed amendment becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: No comments were received.

**Title 20—DEPARTMENT OF INSURANCE,
FINANCIAL INSTITUTIONS AND PROFESSIONAL
REGISTRATION**

**Division 2255—Missouri Board for Respiratory Care
Chapter 4—Continuing Education Requirements**

ORDER OF RULEMAKING

By the authority vested in the Missouri Board for Respiratory Care under sections 334.840, 334.850, and 334.880, RSMo 2016, the board amends a rule as follows:

**20 CSR 2255-4.010 Continuing Education Requirements
is amended.**

A notice of proposed rulemaking containing the text of the proposed amendment was published in the *Missouri Register* on April 16, 2018 (43 MoReg 784–785). No changes have been made in the text of the proposed amendment, so it is not reprinted here. This proposed amendment becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: No comments were received.

**Title 20—DEPARTMENT OF INSURANCE,
FINANCIAL INSTITUTIONS AND PROFESSIONAL
REGISTRATION**

**Division 2267—Office of Tattooing, Body Piercing, and
Branding
Chapter 2—Licensing Requirements**

ORDER OF RULEMAKING

By the authority vested in the Office of Tattooing, Body Piercing, and Branding under section 324.522, RSMo 2016, the office amends a rule as follows:

20 CSR 2267-2.020 Fees is amended.

A notice of proposed rulemaking containing the text of the proposed amendment was published in the *Missouri Register* on April 16, 2018 (43 MoReg 785–787). No changes have been made in the text of the proposed amendment, so it is not reprinted here. This proposed amendment becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: No comments were received.

This section may contain notice of hearings, correction notices, public information notices, rule action notices, statements of actual costs, and other items required to be published in the *Missouri Register* by law.

**Title 2—DEPARTMENT OF AGRICULTURE
Division 90—Weights, Measures and Consumer
Protection**

**FISCAL YEAR JULY 1, 2018–JUNE 30, 2019
BUDGET PLAN**

PURPOSE: This proposed budget is filed in compliance with the provisions of section 323.025.10, RSMo 2016, which requires the Missouri Propane Safety Commission to prepare and submit a budget plan for public comment.

INCOME:

Estimated Assessments*	\$528,750
Interest Income	\$ 3,000
Total Income:	
\$531,750	

EXPENSES:

Furnishings, Equipment, and Vehicle (Depreciation and Amortization)	\$ 19,300
Rent, Utility, and Communication Expenses	\$ 22,000
Professional and Contract Services	\$ 33,100
Operating Expenses	\$ 13,000
Personnel Expenses	\$280,000
Employee Benefits	\$ 66,500
Inspection and Meeting Expenses	\$ 58,500
Commissioner Expenses	\$ 7,500
Insurance Expenses	\$ 4,150
Total Expenses:	\$504,050
NET	\$ 27,700

*Assessment rates: 0.00225/gallon

AUTHORITY: section 323.025.10, RSMo 2016.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed budget with the Missouri Propane Safety Commission, 4110 Country Club Drive, Suite 200, Jefferson City, MO 65109-0302. To be considered, comments must be received within thirty (30) days after publication of this notice in the Missouri Register. No public hearing is scheduled.

**Title 2—DEPARTMENT OF AGRICULTURE
Division 90—Weights, Measures and Consumer
Protection**

NON-SUBSTANTIVE CHANGE REQUEST

The Missouri Department of Agriculture, Weights, Measures and Consumer Protection Division requests that the secretary of state make a non-substantive change to the following rule(s) in accordance with the provisions of section 536.032, RSMo. Division name change from Weights and Measures to Weights, Measures and Consumer Protection.

Chapter 21—Weighing and Measuring Devices

2 CSR 90-21.060 National Type Evaluation Regulation
Changes in: Division Title and Section (1)

Chapter 24—Collection of Inspection Fees

2 CSR 90-24.010 Collection of Inspection Fees
Changes in: Division Title

This change will appear in the August 31, 2018 update to the *Code of State Regulations*.

**Title 3—DEPARTMENT OF CONSERVATION
Division 10—Conservation Commission
Chapter 2—Missouri Managed Woods**

STATEMENT OF ACTUAL COST

3 CSR 10-2.020 Forest Cropland

The original estimated public cost for this rulemaking was published in the *Missouri Register* April 15, 2016 (41 MoReg 482–487). Even though the actual cost to state agencies and political subdivisions did not exceed the cost estimate by more than ten percent (10%), the estimated costs deviated from the actual costs sufficiently to warrant explanation for purposes of section 536.200.2, RSMo 2000. The estimated annual increase in cost to the Department of Conservation was four hundred eighty-seven thousand dollars (\$487,000) as payments to counties in-lieu of taxes for lands enrolled.

This was based upon anticipated enrollment of five hundred (500) acres per year. As of December 31, 2017, the department has enrolled only four hundred seventy-five (475) acres. It is anticipated that an additional two thousand five hundred (2,500) acres will be enrolled by December 31, 2018. This translates to an actual cost of four hundred seventy-five dollars (\$475) in FY19 to be paid to counties in-lieu of taxes and an estimated two thousand five hundred dollars (\$2,500) in FY20.

These low numbers are attributed to a soft role out of the program to ensure the program is managed correctly during these initial enrollments. A larger promotion is anticipated in the fall/winter of 2018/2019 to increase awareness and interest in the program.

It should also be noted that the total cost relates to a fully implemented program once it reaches a target enrollment of five hundred thousand (500,000) acres. It will take five (5) years or longer to enroll acreage to that level. Once reached, costs will remain consistently at five hundred thousand dollars (\$500,000) annually unless an increase in acreage enrollment is desired.

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Missouri Department of Revenue

EI0130

Taxation Division

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

The following is a list of all construction contractors performing work on construction projects in Missouri who are known by the Department of Revenue to be transient employers pursuant to Section 285.230, RSMo. This list is provided as a guideline to assist public bodies with their responsibilities under this section that states, "any county, city, town, village or any other political subdivision which requires a building permit for a person to perform certain construction projects shall require a transient employer to show proof that the employer has been issued a tax clearance and has filed a financial assurance instrument as required by Section 285.230 before such entity issues a building permit to the transient employer."

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
2 POINT CONSTRUCTION CO LLC	7252 W FRONTAGE RD		SHAWNEE	KS	66203-4638
4MC CORPORATION	8040 JORDAN RD		OAKLEY	IL	62501-6999
A & B PROCESS SYSTEMS CORP	PO BOX 86		STRATFORD	WI	54484-0086
A & K CONSTRUCTION SERVICES INC	100 CALLOWAY CT		PADUCAH	KY	42001-9035
A EPSTEIN & SONS INTERNATIONAL INC	600 W FULTON ST STE 800		CHICAGO	IL	60661-1254
A I INTERNATIONAL INC	8055A NATIONAL TPKE		LOUISVILLE	KY	40214-5201
A LUSKER MASONRY LLC	452 S 210TH ST		FRONTENAC	KS	66763-8407
A ROCK CONSTRUCTION CO INC	316 IONE ST		GREENWOOD	MS	38930-3712
A+ COMMUNICATIONS & SECURITY LLC	5609 NE 22ND ST		DES MOINES	IA	50313-2531
AAPCO SOUTHEAST	506 WEBB RD		CONCORD	NC	28025-9072
ABAT BUILDERS INC	10700 W HIGGINS RD STE 350		ROSEMONT	IL	60018-3723
ABATEPRO INC	PO BOX 674		EDWARDSVILLE	IL	62025-0674
ABSOLUTE CONSTRUCTION INC	954 KENNEDY AVE		SCHERERVILLE	IN	46375-7100

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

EI0130

Taxation Division

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
ACADEMY ROOFING & SHEET METAL OF THE MIDWEST INC	6361 NE 14TH ST		DES MOINES	IA	50313-1212
ACCEL ALARM SYSTEMS INC	PO BOX 696		SCOTTSBORO	AL	35768-0696
ACCESS RIGGING LLC	514 ANCLOTE RD		TARPON SPGS	FL	34689-6701
ACCESSIBILITY REMODELING LLC	6025 METCALF LN # 320		SHAWNEE MSN	KS	66202-2339
ACE AIR CONDITIONING INC	2985 ENTERPRISE RD STE A		DEBARY	FL	32713-2710
ACE REFRIGERATION OF IOWA INC	6440 6TH ST SW		CEDAR RAPIDS	IA	52404-4733
ACE SIGN COMPANY	2540 S 1ST ST		SPRINGFIELD	IL	62704-4700
ACE/AVANT CONCRETE CONSTRUCTION CO INC	PO BOX 14006		ARCHDALE	NC	27263-7006
ADVANCE ELECTRIC INC	353 N INDIANA AVE		WICHITA	KS	67214-4034
ADVANCED CABLING SYSTEMS LLC	4950 NORTHSORE LN		N LITTLE ROCK	AR	72118-5321
ADVANCED DEVELOPMENT INC	2426 ADVANCED BUS CTR DR		COLUMBUS	OH	43228-9042
ADVANCED EROSION SOLUTIONS LLC	15257 S KEELER ST		OLATHE	KS	66062-2714
ADVANCED MONITORING SERVICES INC	PO BOX 8686		FAYETTEVILLE	AR	72703-0011
ADVANTAGE BLASTING & DEMOLITION LLC	2900 SOUTH NOAH DRILVE		SAXONBURG	PA	16056
AE MFG INC	PO BOX 9457		TULSA	OK	74157-0457
AES MECHANICAL SERVICES GROUP INC	PO BOX 780115		TALLASSEE	AL	36078-0014
AH BECK FOUNDATION CO INC	5123 BLANCO RD		SAN ANTONIO	TX	78216-7098

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

EI0130

Taxation Division

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
AHRS CONSTRUCTION INC	533 RAILROAD ST		BERN	KS	66408-8006
AIC INSULATION COMPANY INC	19925 W 161ST ST STE B		OLATHE	KS	66062-2788
AIR-CURE INCORPORATED	8501 EVERGREEN BLVD NW		MINNEAPOLIS	MN	55433-6035
AIRFIELD WESTERN LLC	1414 HAWK PKWY UNIT I2		MONTROSE	CO	81401-6443
ALBERTINE COMPANY LLC	2176 WEST ST STE 207		GERMANTOWN	TN	38138-3859
ALL AMERICAN TRACK INC	PO BOX 186		ASH FORK	AZ	86320-0186
ALL PURPOSE ERECTORS INC	1112 STARLIFTER DR		LEBANON	IL	62254-2724
ALL SERVICE CONTRACTING CORP	2024 E DAMON AVE		DECATUR	IL	62526-4749
ALL STAR ELECTRIC NA LLC	PO BOX 450879		GROVE	OK	74345-0879
ALL TRADES HISTORICAL RESTORATION LLC	252 3RD ST N		ST PETERSBURG	FL	33701-3819
ALLENTECH INC	6350 HEDGEWOOD DR UNIT 100		ALLENTOWN	PA	18106-9257
ALLIANCE GLAZING TECHNOLOGIES, INC.	646 FORESTWOOD DR		ROMEDEVILLE	IL	60446-1378
ALLIANCE RETAIL CONSTRUCTION INC	6000 CLARK CENTER AVE		SARASOTA	FL	34238-2716
ALPHA MECHANICAL SERVICE INC	7200 DISTRIBUTION DR		LOUISVILLE	KY	40258-2827
AMC INSPECTION & LOCATORS	PO BOX 592		BEEBE	AR	72012-0592
AMERICAN BRIDGE COMPANY	1000 AMERICAN BRIDGE WAY		CORAOPOLIS	PA	15108-1266
AMERICAN COATINGS	612 W IRIS DR		NASHVILLE	TN	37204-3121
AMERICAN GLASS INC	4600 W 21ST ST		TULSA	OK	74107-3455

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

EI0130

Taxation Division

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
AMERICAN LIFT & SIGN SERVICE COMPANY	6958 N 97TH CIR		OMAHA	NE	68122-1060
AMERICAN PRESERVATION BUILDERS LLC	8111 ROCKSIDE RD STE 101		CLEVELAND	OH	44125-6130
AMERICAN REMODELING CONTRACTORS INC	776 N WEST ST		WICHITA	KS	67203-1235
AMERICAN ROOFING	2500 S 2ND ST		LEAVENWORTH	KS	66048-4542
AMERICAN SEALANTS INC	2483 RIVERSIDE PKWY		GRAND JCT	CO	81505-1319
AMERICAN WELDING AND GAS INC	4900 FALLS OF NEUSE RD STE 150		RALEIGH	NC	27609-5490
AMES CONSTRUCTION INC	14420 COUNTY ROAD 5		BURNSVILLE	MN	55306-6997
ANCHOR SIGN INC	PO BOX 22737		CHARLESTON	SC	29413-2737
ANTEX ROOFING COMPANY INC	1360 HUGH RD		HOUSTON	TX	77067-1598
ANTIGO CONSTRUCTION INC	PO BOX 12		ANTIGO	WI	54409-0012
AOI CORPORATION	8801 S 137TH CIR		OMAHA	NE	68138-3455
AP PROFESSIONALS OF PHOENIX LLC	350 LINDEN OAKS		ROCHESTER	NY	14625-2807
APACHE INDUSTRIAL UNITED INC	250 ASSAY ST STE 500		HOUSTON	TX	77044-3507
APPLE ELECTRIC INTEGRATED SOLUTIONS INC	PO BOX 998		LOUISBURG	KS	66053-0998
APPLIED POLYMERIC INC	131 SAINT JAMES WAY		MOUNT AIRY	NC	27030-6068
ARACREBS1 LLC	PO BOX 1670		SPRINGDALE	AR	72765-1670
ARCHER WESTERN CONTRACTORS LLC	PAYROLL 929 W ADAMS ST		CHICAGO	IL	60607
ARCHWALL LLC	PO BOX 38		STRAWBERRY PT	IA	52076-0038

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

EI0130

Taxation Division

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
ARCO DESIGN BUILD MIDWEST INC	900 N ROCK HILL RD		SAINT LOUIS	MO	63119-1315
ARDENT SERVICES	170 NEW CAMELLIA BLVD		COVINGTON	LA	70433-7819
ARISTEO CONSTRUCTION COMPANY	12811 FARMINGTON RD		LIVONIA	MI	48150-1607
ARISTEO INSTALLATION, LLC	12811 FARMINGTON RD		LIVONIA	MI	48150-1607
ARMI CONTRACTORS INC	1860 E PUMP STATION RD		FAYETTEVILLE	AR	72701-7294
ARNDT ENTERPRISES INC	2579 195TH ST		DE WITT	IA	52742-9114
ARNOLDS CUSTOM SEEDING LLC	4626 WCR 65		KEENESBURG	CO	80643
ARROW SIGNS & OUTDOOR ADVERTISING INC	4545 N ALBY STREET		ALTON	IL	62002
ARVOS LJUNGSTROM LLC	3020 TRUAX RD		WELLSVILLE	NY	14895-9531
ASA CARLTON INC	5224 PALMERO CT # 1		BUFORD	GA	30518-5868
ASPHALT STONE COMPANY	PO BOX 1060		JACKSONVILLE	IL	62651-1060
ASSOCIATED FIRE PROTECTION	4905 S 97TH ST		OMAHA	NE	68127-2202
ATLANTIC FIXTURE INSTALLATIONS INC	1615 ROBIN CIR STE H		FOREST HILL	MD	21050-3058
ATLAS TRENCHLESS LLC	PO BOX 488		ROCKVILLE	MN	56369-0488
ATWELL LLC	2 TOWNE SQ STE 700		SOUTHFIELD	MI	48076-3737
ATWOOD ELECTRIC INC	PO BOX 311		SIGOURNEY	IA	52591-0311
AUDIO VISUAL INNOVATIONS INC	6301 BENJAMIN RD STE 101		TAMPA	FL	33634-5115
AYARS & AYARS INC	2436 N 48TH ST		LINCOLN	NE	68504-3627
B & M WEST CONSTRUCTION OF TEXAS LP	2571 HWY 60		BARTOW	FL	33830-8872

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

EI0130

Taxation Division

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
B & S STEEL CO., LLC	1604 S AVE		MORNING SUN	IA	52640-9698
B + T GROUP HOLDINGS INC	1717 S BOULDER AVE STE 300		TULSA	OK	74119-4843
B D WELCH CONSTRUCTION LLC	120 INDUSTRIAL STATION RD		STEELE	AL	35987-0017
B&E ELECTRICAL INC	1843 ROYLE RD		SUMMERVILLE	SC	29486-1779
BAILEY CONSTRUCTION AND CONSULTING LLC	2200 N RODNEY PARHAM RD STE 206		LITTLE ROCK	AR	72212-4155
BAJA CONSTRUCTION CO INC	223 FOSTER ST		MARTINEZ	CA	94553-1029
BANKS BROTHERS CONSTRUCTION INC	2300 MYRTLE AVE STE 170		SAINT PAUL	MN	55114-1899
BARRIER TECHNOLOGIES LLC	8245 NIEMAN RD		LENEXA	KS	66214-1508
BARTON ELECTRIC CONTRACTING INC	247 STATE ROUTE 160		TRENTON	IL	62293-4667
BAUER DESIGN BUILD LLC	14030 21ST AVE N		PLYMOUTH	MN	55447-4686
BAY INSULATION CONTRACTING INC	PO BOX 9229		GREEN BAY	WI	54308-9229
BAZIN SAWING & DRILLING LLC	30790 SWITZER RD		LOUISBURG	KS	66053-5903
BCI NATIONAL	3158 S MAIN ST		SALT LAKE CTY	UT	84115-3750
BEL O COOLING & HEATING INC	90 WHITEHALL DR		O FALLON	IL	62269-2670
BERBERICH TRAHAN & CO PA	3630 SW BURLINGAME RD		TOPEKA	KS	66611-2092
BERG PAINTING LLC	118 PEAVEY CIR		CHASKA	MN	55318-2347
BEST BUILDERS OF ILLINOIS	717 N CLINTON ST		LITCHFIELD	IL	62056-1024

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

Taxation Division

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Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
BEST PLUMBING & HEATING	421 N SECTION LINE RD		SCAMMON	KS	66773-6201
BETTIS ASPHALT & CONSTRUCTION INC	PO BOX 1694		TOPEKA	KS	66601-1694
BG ZYCRON STAFFING	5850 GRANITE PKWY STE 730		PLANO	TX	75024-0035
BIERMAN CONTRACTING INC	PO BOX 1887		COLUMBUS	NE	68602-1887
BIGGE CRANE AND RIGGING CO	10700 BIGGE ST		SAN LEANDRO	CA	94577-1032
BIRDAIR INC	65 LAWRENCE BELL DR STE 100		AMHERST	NY	14221-7094
BKM CONSTRUCTION LLC	501 S 5TH ST		LEAVENWORTH	KS	66048-2610
BLAHNIK CONSTRUCTION COMPANY	150 50TH AVENUE DR SW		CEDAR RAPIDS	IA	52404-5038
BLANKENSHIP CONSTRUCTION CO	1824 IL ROUTE 140		MULBERRY GRV	IL	62262-3303
BLD SERVICES LLC	2424 TYLER ST		KENNER	LA	70062-4845
BLUE SKY CONSTRUCTION OF IDAHO LLC	2365 E COLUMBIA RD		MERIDIAN	ID	83642-7211
BLUE STREAK CABLE & TELECOMMUNICATIONS LLC	8200 NW 41ST ST STE 318		DORAL	FL	33166-6206
BLUESTONE LLC	220 N SMITH ST STE 420		PALATINE	IL	60067-2477
BLUEWATER CONSTRUCTORS INC	PO BOX 55482		HOUSTON	TX	77255-5482
BLUSKY RESTORATION CONTRACTORS INC	9767 E EASTER AVE		CENTENNIAL	CO	80112-3747
BOB BERGKAMP CONSTRUCTION CO INC	3709 S WEST ST		WICHITA	KS	67217-3898
BOB FLORENCE CONTRACTOR INC	PO BOX 5258		TOPEKA	KS	66605-0258

Run Date : 7/2/2018 6:32:41 AM

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Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
BOB MYER BUILDERS INC	147 NW NORTH SHORE DR		LAKE WAUKOMIS	MO	64151-1459
BODINE ELECTRIC OF DECATUR	PO BOX 976		DECATUR	IL	62525-1810
BORTON CONSTRUCTION INC	2 COPELAND AVE STE 201		LA CROSSE	WI	54603-3419
BORTON LC	PO BOX 2108		HUTCHINSON	KS	67504-2108
BOUMA CONSTRUCTION INC	4101 ROGER B CHAFFEE MEM DR SE		GRAND RAPIDS	MI	49548-3443
BR INDUSTRIAL OPERATIONS LLC	2600 CITIPLACE CT		BATON ROUGE	LA	70808-2711
BRADSHAW CONSTRUCTION CORPORATION MARYLAND	175 W LIBERTY RD		ELDERSBURG	MD	21784-9381
BRANCH BUILDING GROUP LLC	813 COLUMBIA AVE STE B		FRANKLIN	TN	37064-8222
BRANTLEY CONSTRUCTION LLC	7227 W 162ND TER		STILWELL	KS	66085-8238
BRAYMAN CONSTRUCTION CORPORATION	1000 JOHN ROEBLING WAY		SAXONBURG	PA	16056-9778
BRENT ELECTRIC CO INC	5840 S MEMORIAL DR STE 214		TULSA	OK	74145-9081
BREWSTER COMPANIES INC	6321 E MAIN ST		MARYVILLE	IL	62062-2014
BRINK CONSTRUCTORS INC	2950 N PLAZA DR		RAPID CITY	SD	57702-9323
BRINK READY MIX	4400 N 24TH ST		QUINCY	IL	62305-7775
BRITT AASEBY CONSTRUCTION INC	3025 HARBOR LN N STE 410		PLYMOUTH	MN	55447-5142
BROCK SERVICES LLC	PO BOX 306		BEAUMONT	TX	77704-0306
BROOKS DIRECTIONAL DRILLING LLC	24531 102ND DR		BURDEN	KS	67019-9202

Run Date : 7/2/2018 6:32:41 AM

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Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
BROOKS ELECTRICAL	1107 N 1712 RD		LAWRENCE	KS	66049-9714
BROWN & ROOT INDUSTRIAL SERVICES LLC	601 JEFFERSON ST		HOUSTON	TX	77002-7900
BROWN CHURCH CONSTRUCTION INC	1616 30TH AVE		KEARNEY	NE	68845-1509
BROWN TANK LLC	6995 55TH ST N STE A		SAINT PAUL	MN	55128-1726
BRUCE DAVIS CONSTRUCTION LLC	PO BOX 1924		EMPORIA	KS	66801-1924
BRUMIT SERVICES INC	616 PAULA DR APT B		WATERLOO	IL	62298-1881
BRUNNERS QUALITY DECKS	9111 W 131ST PL		OVERLAND PARK	KS	66213-4602
BRYAN-OHLMEIER CONST INC	911 N PEARL ST		PAOLA	KS	66071-1139
BUFFALO GAP INSTRUMENTATION & ELECTRICAL COMPANY I	2532 AYMOND ST		EUNICE	LA	70535-6843
BUILD IT RIGHT LLC	PO BOX 372		BELEN	NM	87002-0372
BUILDING CRAFTS INC	2 ROSEWOOD DR		WILDER	KY	41076-9007
BULLEY & ANDREWS MASONRY RESTORATION LLC	1755 W ARMITAGE AVE		CHICAGO	IL	60622-1189
BUSH TURF INC	6800 78TH AVE W		MILAN	IL	61264-4146
BUTT CONSTRUCTION COMPANY INCORPORATED	3858 GERMANY LN		DAYTON	OH	45431-1607
BYUS CONSTRUCTION INC	16602 CRAWFORD AVE		MARKHAM	IL	60428-5378
C & A SCALE SERVICE, INC.	25300 OLD LINCOLN HWY		HONEY CREEK	IA	51542-4236
C & C DEMOLITION	1226 ILLINOIS ST		DES MOINES	IA	50314-3106
C D L ELECTRIC COMPANY INC	1308 N WALNUT ST		PITTSBURG	KS	66762-3034

Run Date : 7/2/2018 6:32:41 AM

EI0130

Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
CACHE VALLEY ELECTRIC COMPANY	875 N 1000 W		LOGAN	UT	84321-7800
CADY AQUASTORE	920 W PRAIRIE DR STE G		SYCAMORE	IL	60178-3123
CAHILL CONSTRUCTION INC	5233 BETHEL CENTER MALL		COLUMBUS	OH	43220-2085
CAM OF ILLINOIS LLC	PO BOX 87129		SOUTH ROXANA	IL	62087-7129
CANNON UTILITY SERVICES LLC	1320 E STATE ROUTE 15		BELLEVILLE	IL	62220-4803
CANYON PLUMBING INC	PO BOX 295		ASH FLAT	AR	72513-0295
CAPEHART & CAPEHART BUILDERS INC	PO BOX 846		SALLISAW	OK	74955-0846
CAPITAL INSULATION INC	2714 NW TOPEKA BLVD STE 106		TOPEKA	KS	66617-1148
CAPITOL CONSTRUCTION SERVICES OF INDIANA INC	11051 VILLAGE SQUARE LN		FISHERS	IN	46038-4552
CARDINAL INTERNATIONAL GROOVING & GRINDING LLC	PO BOX 450		CONSHOHOCKEN	PA	19428-0450
CARPORT STRUCTURES CORPORATION	1825 METAMORA RD		OXFORD	MI	48371-2419
CAS CONSTRUCTORS LLC	3500 SW FAIRLAWN RD STE 200		TOPEKA	KS	66614-3979
CASE FOUNDATION COMPANY	PO BOX 40		ROSELLE	IL	60172
CASEY INDUSTRIAL INC	1400 W 122ND AVE STE 200		WESTMINSTER	CO	80234-3440
CASH DEPOT LTD	1740 COFRIN DR STE 2		GREEN BAY	WI	54302-2086
CATALYST AIR MANAGEMENT INC	2505 BYINGTON SOLWAY RD		KNOXVILLE	TN	37931-3854
CB INDUSTRIES INC	17250 NEW LENOX RD		JOLIET	IL	60433-9758

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

EI0130

Taxation Division

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
CB RECOVERY GROUP INC	1821 WALDEN OFFICE SQ STE 395		SCHAUMBURG	IL	60173-4285
CBS CONSTRUCTORS	PO BOX 995		MC COOK	NE	69001-0995
CCC GROUP INC	PO BOX 200350		SAN ANTONIO	TX	78220-0350
CEC HOLDINGS INC	12500 AURORA AVE N		SEATTLE	WA	98133-1518
CELLSITE SOLUTIONS LLC	1720 I AVE NE		CEDAR RAPIDS	IA	52402-5205
CEMROCK LANDSCAPES INC	4790 S JULIAN AVE		TUCSON	AZ	85714-2123
CENTRAL MECHANICAL CONSTRUCTION CO INC	PO BOX 1063		MANHATTAN	KS	66505-1063
CENTRAL SUBSURFACE CONTRACTING OF ILLINOIS INC	30599 NATALIE LN		GIRARD	IL	62640-7172
CENTRIC SECURITY & AUTOMATION INC	103 LANTER CT		COLLINSVILLE	IL	62234-6124
CENTURY FIRE PROTECTION LLC	2450 SATELLITE BLVD		DULUTH	GA	30096-5801
CERAM ENVIRONMENTAL INC	7304 W 130TH ST STE 140		OVERLAND PARK	KS	66213-2644
CHALLENGER CONSTRUCTION CORPORATION	PO BOX 216		GIRARD	KS	66743-0216
CHARLES C BRANDT & COMPANY INC	1505 N SHERMAN DR		INDIANAPOLIS	IN	46201-1517
CHARLES F EVANS CO INC	PO BOX 228		ELMIRA	NY	14902-0228
CHATTANOOGA BOILER & TANK CO INC	PO BOX 110		CHATTANOOGA	TN	37401-0110
CHERNE CONTRACTING CORPORATION	3555 FARNAM ST		OMAHA	NE	68131-3311

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

EI0130

Taxation Division

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
CHEROKEE ENTERPRISES INC	14474 COMMERCE WAY		MIAMI LAKES	FL	33016-1508
CILLESSEN & SONS INC	PO BOX 9		KECHI	KS	67067-0009
CIRCLE C PAVING AND CONSTRUCTION LLC	PO BOX 361		GODDARD	KS	67052-0361
CJ DRILLING INC	19N041 GALLIGAN RD		DUNDEE	IL	60118-9536
CLASSIC INDUSTRIAL SERVICES INC	456 HIGHLANDIA DR		BATON ROUGE	LA	70810-5906
CLASSIC PROTECTIVE COATINGS INC	N 7670 STATE HWY 25		MENOMONIE	WI	54751
CLEANWRAP INC	4495 MILL POND RD		SILVER POINT	TN	38582-6069
CLEAVERS FARM SUPPLY INC	2103 S SANTA FE AVE		CHANUTE	KS	66720-3201
CLIMATE PROS INC	55 N BRANDON DR		GLENDALE HTS	IL	60139-2024
CLOVER TOOL COMPANY INC	PO BOX 820809		HOUSTON	TX	77282-0809
CLYDE BERGEMANN POWER GROUP AMERICAS	4015 PRESIDENTIAL PKWY		ATLANTA	GA	30340-3707
CMC ELECTRIC INC	PO BOX 37		COLLINSVILLE	IL	62234-0037
COACH HOUSE INC	PO BOX 320		ARTHUR	IL	61911
COASTAL AUTOMATIC FIRE PROTECTION LLC	3590 ROCKY HILL DEDEAUX RD		KILN	MS	39556-6021
COASTAL ENVIRONMENTAL GROUP INC	7 POLICE PLZ		POTOSI	MO	63664-1877
COLCON INDUSTRIES CORPORATION	PO BOX 647		SULLIVAN	IL	61951-0647
COLUMBIA CONSTRUCTION INC	PO BOX 445		SPRING HILL	KS	66083-0445

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

E10130

Taxation Division

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
COMBUSTION SERVICES INC	PO BOX 112		ALTAMONT	KS	67330-0112
COMMERCE CONSTRUCTION INC	695 N 40TH ST		SPRINGDALE	AR	72762-0602
COMMERCIAL CONSTRUCTION MANAGEMENT INC	222 E DUNKLIN ST STE 102		JEFFERSON CITY	MO	65101-3168
COMMONWEALTH ELECTRIC COMPANY OF THE MIDWEST	PO BOX 80638		LINCOLN	NE	68501-0638
COMMUNICATION ADVISERS INC	1330 FRONTIER LN		MANHATTAN	KS	66503-2537
COMMUNICATION DATA LINK LLC	1305 SW 37TH ST		GRIMES	IA	50111-5064
COMPLETE LAUNDRY EQUIPMENT LLC	PO BOX 251		AUSTIN	AR	72007-0251
CONCO SERVICES CORPORATION	135 SYLVAN ST		VERONA	PA	15147-1032
CONCORD TANK CORPORATION	PO BOX 5207		CONCORD	NC	28027-1503
CONCRETE EXPRESSIONS LLC	291 E GLENN MILLER DR		CLARINDA	IA	51632-2736
CONCRETE SYSTEMS COMPANY LLC	121 EDWARDS DR		JACKSON	TN	38301-7716
CONLEY SITEWORK & UTILITIES INC	PO BOX 715		EUDORA	KS	66025-0715
CONNECTED TECHNOLOGIES LLC	PO BOX 1983		ATHENS	GA	30603-1983
CONSTRUCTION DESIGNWORKS LLC	6657 WOODLAND DR		SHAWNEE	KS	66218-9745
CONSTRUCTION ENTERPRISES INC	2179 EDWARD CURD LN STE 100		FRANKLIN	TN	37067-5789

Run Date : 7/2/2018 6:32:41 AM

EI0130

Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
CONTEGRA SERVICES LLC	22 GTWAY COMM CTR W 110		EDWARDSVILLE	IL	62025
CONTINENTAL POOLS INC	805 E WARREN ST		GARDNER	KS	66030-1619
CONTRACTOR SOLUTION GROUP LLC	670 WHITE RD STE A		SPRINGDALE	AR	72762-3027
CONWAY PHILLIPS HOLDING LLC	13A TALBOT AVE		BRADDOCK	PA	15104-1113
COOPER RAIL SERVICE INC	PO BOX 199		HUNTINGBURG	IN	47542-0199
COOPERS STEEL FABRICATORS	PO BOX 149		SHELBYVILLE	TN	37162-0149
CORNERSTONE FCE SERVICES LLC	8811 TEEL PKWY UNIT 6074		FRISCO	TX	75035-4258
CORNHUSKER INSULATION LLC	2201 RIVER ROAD DR		WATERLOO	NE	68069-3407
CORVAL CONSTRUCTORS INC	1633 EUSTIS ST		SAINT PAUL	MN	55108-1219
COTTON COMMERCIAL USA INC	5443 KATY HOCKLEY CUT OFF RD		KATY	TX	77493-7008
COULTER GLASS INC	13711 E 66TH ST N		OWASSO	OK	74055-7141
COUNTRY CARPET INC	14969 WATERMAN CROSSING		MAPLE HILL	KS	66507
COUNTRY CERAMIC LLC	14969 WATERMAN CROSSING RD		MAPLE HILL	KS	66507-8862
COUNTY CONTRACTORS INC	PO BOX 3522		QUINCY	IL	62305-3522
COWIN & CO INC MINING ENGINEERS AND CONTRACTORS	PO BOX 19009		BIRMINGHAM	AL	35219-9009
CRAIGS RESTORATION & REPAIR LLC	PO BOX 605		DURANT	IA	52747-0605

Run Date : 7/2/2018 6:32:41 AM

EI0130

Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
CRAMER AND ASSOCIATES INC	3100 SW BROOKSIDE DR		GRIMES	IA	50111-4977
CROOKHAM CONSTRUCTION LLC	PO BOX 339		TONGANOXIE	KS	66086-0339
CROWN CORR INC	7100 W 21ST AVE		GARY	IN	46406-2499
CTS CONSTRUCTION INC	6661 CORPORATE DR		BLUE ASH	OH	45242-2112
CUNNINGHAM	847 FOX RUN LN		OSKALOOSA	IA	52577-4162
CUSTOM POOL LLC	32 HOWARD DR		BELLEVILLE	IL	62223-4016
CUSTOM TREE CARE INC	3722 SW SPRINGCREEK LN		TOPEKA	KS	66610-1221
CWPMO INC	1682 LANGLEY AVE		IRVINE	CA	92614-5620
D & D INDUSTRIAL CONTRACTING INC	101 MULLEN DR		WALTON	KY	41094-9607
D & L EXCAVATING INC	1958 HIGHWAY 104		LIBERTY	IL	62347-2141
D AN T ROOFING LLC	32470 LONE STAR RD LOT A27		PAOLA	KS	66071
D MCGINNIS INDUSTRIES INC	7 INDUSTRIAL PARK		CAHOKIA	IL	62206-1077
DADE CONSTRUCTION LLC	PO BOX 4090		KANSAS CITY	KS	66104-0090
DAMATO BUILDERS + ADVISORS LLC	40 CONNECTICUT AVE		NORWICH	CT	06360-1502
DAN R DALTON INC	PO BOX 14139		SPOKANE VLY	WA	99214-0139
DANIEL UTILITY CONSTRUCTION INC	9715 COLONEL GLENN RD		LITTLE ROCK	AR	72204-8129
DAVID SCHMITT	390 SELBY ST		SAN FRANCISCO	CA	94124-1114
DAVIS CONSTRUCTION	2143 NE HIGHWAY 7		COLUMBUS	KS	66725-2093
DB HEALTHCARE INC	5 GERMANO WAY		ANDOVER	MA	01810-4540

Run Date : 7/2/2018 6:32:41 AM

EI0130

Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
DBS GROUP LLC	2700 NATIONAL DR STE 101		ONALASKA	WI	54650-6709
DCG PETERSON BROTHERS COMPANY	PO BOX 349		SIOUX RAPIDS	IA	50585-0349
DEAN SNYDER CONSTRUCTION CO	PO BOX 181		CLEAR LAKE	IA	50428-0181
DECKER CONSTRUCTION INC	PO BOX 254		COFFEYVILLE	KS	67337-0254
DECKER ELECTRIC INC	4500 W HARRY ST		WICHITA	KS	67209-2736
DEGRAFF CONSTRUCTION LLC	3584 AUSTIN DR		JOPLIN	MO	64804
DEJAGER CONSTRUCTION INC	75 60TH ST SW		WYOMING	MI	49548-5771
DELTA CONCRETE AND INDUSTRIAL CONTRACTING INC	51825 GRATIOT AVE		CHESTERFIELD	MI	48051-2014
DENISON DRYWALL CONTRACTING INC	PO BOX 453		DENISON	IA	51442-0453
DETROIT PIPING GROUP MECHANICAL CONTRACTORS INC	38291 SCHOOLCRAFT RD STE 105		LIVONIA	MI	48150-1150
DF CHASE INC	3001 ARMORY DR STE 200		NASHVILLE	TN	37204-3711
DF OSBORNE CONSTRUCTION INC	3310 SW HARRISON ST STE 3		TOPEKA	KS	66611-2252
DIAMOND CONSTRUCTION COMPANY	2000 N 18TH ST		QUINCY	IL	62301-1435
DIECKER-TERRY MASONRY INC	11327 EIFF RD		MARISSA	IL	62257-1409
DIG AMERICA UTILITY CONTRACTING INC	25135 22ND AVE		SAINT CLOUD	MN	56301-9189

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

Taxation Division

EI0130

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
DIMENSION CONSTRUCTION INC	3776 NEW GETWELL RD		MEMPHIS	TN	38118-6014
DIVERSIFIED COMMERCIAL BUILDERS INC	3691 KENNESAW S INDUSTRIAL DR NW		KENNESAW	GA	30144-6513
DIVERSIFIED TRACK WORKS LLC	17671 US HIGHWAY 6		GENESEO	IL	61254-8620
DL SMITH ELECTRICAL CONSTRUCTION INC	1405 SW 41ST ST		TOPEKA	KS	66609-1295
DOME CORPORATION OF NORTH AMERICA	5450 EAST RD		SAGINAW	MI	48601-9748
DON JULIAN BUILDERS INC	15521 W 110TH ST		LENEXA	KS	66219-1317
DONCO ELECTRICAL CONSTRUCTION LLC	PO BOX 158		EDWARDSVILLE	IL	62025-0158
DORMARK CONSTRUCTION CO	PO BOX 530		GRIMES	IA	50111-0530
DOSTER CONSTRUCTION COMPANY INC	2100 INTERNATIONAL PARK DR		BIRMINGHAM	AL	35243-4209
DOTSON ELECTRIC COMPANY INC	551 CAL BATSEL RD		BOWLING GREEN	KY	42104-8520
DRC EMERGENCY SERVICES LLC	110 VETERANS MEMORIAL BLVD		METAIRIE	LA	70005-3027
DS ELECTRIC LLC	5336 KNOX ST		MERRIAM	KS	66203-2066
DTLS INCORPORATED	PO BOX 1615		BERNALILLO	NM	87004-1615
DUANE HOUKOM INC	PO BOX 1206		FRIENDSWOOD	TX	77549-1206
DUERSON INC	601 1ST AVE N		ALTOONA	IA	50009-1431
DUFFY CONSTRUCTION COMPANY INC	7211 W 98TH TER STE 110		OVERLAND PARK	KS	66212-2257
DUININCK INC	PO BOX 208		PRINSBURG	MN	56281-0208

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

EI0130

Taxation Division

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
DUN TRANSPORTATION & STRINGING INC	304 REYNOLDS LN		SHERMAN	TX	75092-6839
DUNK FIRE & SECURITY INC	3446 WAGON WHEEL RD		SPRINGDALE	AR	72762-0115
E80 PLUS CONSTRUCTORS LLC	7120 PATTON RD		DEFOREST	WI	53532-1836
EBERHART SIGN & LIGHTING CO	104 1ST AVE		EDWARDSVILLE	IL	62025-2574
EBERT CONSTRUCTION CO INC	PO BOX 198		WAMEGO	KS	66547-0198
EBM CONSTRUCTION INC	1014 SHERWOOD RD		NORFOLK	NE	68701-9060
ECKINGER CONSTRUCTION COMPANY	2340 SHEPLER CHURCH AVE SW		CANTON	OH	44706-3093
EDNA LUMBER CO INC	PO BOX 820		EDNA	TX	77957-0820
EDWINS GREENHOUSE CONSTRUCTION INC	6586 POWDER VALLEY RD		ZIONSVILLE	PA	18092-2225
EJM PIPE SERVICE INC	14461 LAKE DR NE		COLUMBUS	MN	55025-8600
ELECTRICO INC	7706 WAGNER RD		MILLSTADT	IL	62260-2910
ELECTRICOMM INC	PO BOX 8324		TOPEKA	KS	66608-0324
ELEVATOR SAFETY INSPECTION SERVICES INC	PO BOX 6866		SHERWOOD	AR	72124-6866
ELLINGSON DRAINAGE INC	PO BOX 68		WEST CONCORD	MN	55985-0068
ELLIOTT ELECTRICAL INC	117 S RICHARDS ST		BENTON	AR	72015-4239
ELLIOTT ROOFING LLC	3900 N HARVARD AVE		OKLAHOMA CITY	OK	73122-2511
ELLSWORTH ELECTRIC INC	4425 N HIGHWAY 81		DUNCAN	OK	73533-8950
EMBREE CONSTRUCTION GROUP INC OF TEXAS	4747 WILLIAMS DR		GEORGETOWN	TX	78633-3799

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Run Date : 7/2/2018 6:32:41 AM

EI0130

Show Secretary of State Cover: Yes

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
EMCO CHEMICAL DISTRIBUTORS INC	8601 95TH ST		PLEASANT PR	WI	53158-2205
EMERALD TRANSFORMER PPM LLC	4419 ST HWY 83 N		DEFUNIAK SPRINGS	FL	32433-3958
EMJ CORPORATION	2034 HAMILTON PLACE BLVD STE 400		CHATTANOOGA	TN	37421-6102
EMPIRE CONSTRUCTION GROUP LLC	9128 W 91ST TER		OVERLAND PARK	KS	66212-3901
EMPIRE CONTRACTORS INC	PO BOX 6327		EVANSVILLE	IN	47719-0327
ENGINEERED FLUID INC	PO BOX 723		CENTRALIA	IL	62801-9111
ENGINEERED STRUCTURES INC	3330 E LOUISE DR STE 300		MERIDIAN	ID	83642-5123
ENGINEERING AMERICA INC	1822 BUERKLE RD		SAINT PAUL	MN	55110-5245
ENGLEWOOD CONSTRUCTION INC	80 MAIN ST		LEMONT	IL	60439-3622
ENHANCED SITE SOLUTIONS LLC	1701 GOLF RD STE 1-900		ROLLING MEADOWS	IL	60008-4246
ENVIROCON INC	PO BOX 16655		MISSOULA	MT	59808-6655
ENVIRONMENTAL FABRICS INC	85 PASCON CT		GASTON	SC	29053-8507
EPC SERVICES COMPANY	1241 S 31ST ST W		BILLINGS	MT	59102-7314
ERV SMITH SERVICES INC	1225 TRUAX BLVD		EAU CLAIRE	WI	54703-1468
ESA SOUTH INC	1681 SUCCESS DR		CANTONMENT	FL	32533-5103
ESSI LLC	1400 W SHADY GROVE RD		GRAND PRAIRIE	TX	75050-7117
EXCEL ENERGY GROUP INC	PO BOX 1281		RUSSELLVILLE	AR	72811-1281
EXCELL CONSTRUCTION SERVICES LLC	2432 BOXANKLE RD		FORSYTH	GA	31029-4428

Run Date : 7/2/2018 6:32:41 AM

EI0130

Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
F & M CONTRACTORS INC	PO BOX 149		CLAYTON	OH	45315-0149
F L CRANE & SONS INC	PO BOX 428		FULTON	MS	38843-0428
FABCOR INC	350 S OHIO ST		MINSTER	OH	45865-1272
FARABEE MECHANICAL INC	PO BOX 1748		HICKMAN	NE	68372-1748
FAUGHN ELECTRIC INC	5980 OLD MAYFIELD RD		PADUCAH	KY	42003-9296
FAYETTEVILLE PLUMBING & HEATING CO INC	PO BOX 8910		FAYETTEVILLE	AR	72703-0016
FC DADSON SIB LLC	N1043 CRAFTSMEN DR STE 2		GREENVILLE	WI	54942-8082
FEDERAL ENGINEERS AND CONSTRUCTORS INC	3240 RICHARDSON RD		RICHLAND	WA	99354-5501
FEDERAL STEEL & ERECTION CO	PO BOX 238		EAST ALTON	IL	62024-0238
FHG INC	7015 TUTOR ST		MINT HILL	NC	28227-4421
FIRE & SECURITY SOLUTIONS GROUP INC	11240 STRANG LINE RD		LENEXA	KS	66215-4039
FIRELAKE CONSTRUCTION INC	14217 W 95TH ST		LENEXA	KS	66215-5208
FIRELINE SPRINKLER CORPORATION	5036 W CLAIREMONT DR		APPLETON	WI	54913-6505
FISH & ASSOCIATES INC	3148 DEMING WAY STE 160		MIDDLETON	WI	53562-1486
FLINT ENERGY SERVICES INC	PO BOX 283		SAINT LOUIS	MO	63166-0283
FLOORSHIELD INC	PO BOX 91105		ALBUQUERQUE	NM	87199-1105
FLORIDA INSTITUTE OF TECHNOLOGY INC	150 W UNIVERSITY BLVD		MELBOURNE	FL	32901-6975
FORD AUDIO VIDEO SYSTEMS LLC	4800 W I 40 SERVICE RD		OKLAHOMA CITY	OK	73128-1208

Run Date : 7/2/2018 6:32:41 AM

EI0130

Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
FORJAK INDUSTRIAL INC	808 RHOADS AVE		COLUMBUS	OH	43205-2572
FORTESSA HOSTING	PO BOX 1734		LAGUNA BEACH	CA	92652-1734
FOSTER ROOFING INC	3357 WAGON WHEEL RD		SPRINGDALE	AR	72762-0106
FOUNDATION SERVICE CORP	PO BOX 120		HUDSON	IA	50643-0120
FOUNDATION SPECIALTIES INC	PO BOX 505		LOWELL	AR	72745-0505
FOUR STAR CONSTRUCTION INC	PO BOX 3037		SUPERIOR	WI	54880-0458
FRAZIER ROOFING & SHEET METAL CO INC	PO BOX 545		DYERSBURG	TN	38025-0545
FREEDOM CONCRETE LLC	PO BOX 731		DE SOTO	KS	66018-0731
FRONTIER MECHANICAL LC	PO BOX 71487		SALT LAKE CTY	UT	84171-0487
FRONTZ DRILING INC	2031 MILLERSBURG RD		WOOSTER	OH	44691-9460
FSG FACILITY SOLUTIONS GROUP INC	4401 W GATE BLVD STE 310		AUSTIN	TX	78745-1494
FULCRUM EXPRESS INC	1945 THE EXCHANGE SE STE 400		ATLANTA	GA	30339-2090
FULSOM BROTHERS INC	PO BOX 522		CEDAR VALE	KS	67024-0522
G B CONSTRUCTION LLC	PO BOX 1305		LOUISBURG	KS	66053-1305
G.A. RICH & SONS INC	PO BOX 50		DEER CREEK	IL	61733-0050
GALLAGHER ASPHALT CORPORATION	18100 INDIANA AVE		THORNTON	IL	60476-1276
GARRISON PLUMBING INC	1375 N WINCHESTER ST		OLATHE	KS	66061-5880
GARTNER REFRIGERATION & MANUFACTURING INC	13205 16TH AVE N		MINNEAPOLIS	MN	55441-4566
GATOR SIGN COMPANY INC	1027 KAREY ANDREWS RD		MCCOMB	MS	39648-9446

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

EI0130

Taxation Division

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
GBA SYSTEMS INTEGRATORS LLC	9801 RENNER BLVD		LENEXA	KS	66219-9718
GENERAL EXCAVATING COMPANY	6701 CORNHUSKER HWY		LINCOLN	NE	68507-3113
GENESEE FENCE & SUPPLY CO	PO BOX 458		RICHMOND	MI	48062-0458
GEORGE H PASTOR & SONS INC	34018 BEACON ST		LIVONIA	MI	48150-1533
GEOSTABILIZATION INTERNATIONAL LLC	543 31 RD		GRAND JCT	CO	81504-5772
GERARD TANK & STEEL INC	PO BOX 513		CONCORDIA	KS	66901-0513
GERENA CONSTRUCTION LLC	9517 E 85TH ST N		VALLEY CENTER	KS	67147
GESCO INC	205 ABERNATHY WAY		ACWORTH	GA	30102-7817
GHPS INC	PO BOX 192449		DALLAS	TX	75219-8520
GIBALTAR CONSTRUCTION COMPANY INC	42 HUDSON ST STE A207		ANNAPOLIS	MD	21401-8537
GIFFIN INC	1900 BROWN RD		AUBURN HILLS	MI	48326-1701
GLASS DESIGN INC	PO BOX 568		SAPULPA	OK	74067-0568
GLOBAL EMPIRE LLC	115 OVERLOOK RD		POMONA	NY	10970-2118
GLOBAL ENERGY SOLUTIONS	707 SABLE OAKS DR STE 150		S PORTLAND	ME	04106-6954
GLOBAL TECHNICAL SOLUTIONS LLC	2900A LAUSAT ST		METAIRIE	LA	70001-5952
GLUE LAM ERECTORS INC	PO BOX 10		TRAFALGAR	IN	46181-0010
GOOLSBY INC	3002 W MAIN ST		BLYTHEVILLE	AR	72315-8600
GORDON ENERGY AND DRAINAGE COMPANY	15735 S MAHAFFIE ST		OLATHE	KS	66062-4038

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

EI0130

Taxation Division

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
GRAND CONSTRUCTION COMPANY LLC	1699 VILLAGE WEST PKWY		KANSAS CITY	KS	66111-1878
GRAND RAPIDS POURED WALLS	8559 PIEDMONT IND DR SW		BYRON CENTER	MI	49315-9356
GRANITE TRANSFORMATIONS	14125 MARSHALL DR		LENEXA	KS	66215-1300
GRE CONSTRUCTION	628 PALESTINE RD		CHESTER	IL	62233-1060
GREAT LAKES CONCRETE PRODUCTS LLC	4555 134TH AVE		HAMILTON	MI	49419-8579
GREAT PLAINS STRUCTURES LLC	3315 LABORE RD		VADNAIS HTS	MN	55110-5149
GRIBBINS INSULATION COMPANY INC	1400 E COLUMBIA ST		EVANSVILLE	IN	47711-5222
GRIFFIN CONTRACT DEWATERING LLC	5306 CLINTON DR		HOUSTON	TX	77020-7912
GRIFFITH STEEL ERECTION	1355 S ANNA ST		WICHITA	KS	67209-2601
GROOME INDUSTRIAL SERVICE GROUP INC	155 FRANKLIN TPKE		WALDWICK	NJ	07463-1816
GUN KO TRAFFIC CONTROL INC	901 W IRONWOOD ST		OLATHE	KS	66061-5384
GUNTERMAN CONSTRUCTION INC	205 E QUINCY ST	P O BOX 423	PLEASANT HILL	IL	62366-2404
GUS CONST CO INC	PO BOX 77		CASEY	IA	50048-0077
GUSTAFSON & GOUDGE INC	PO BOX 28		CLEARBROOK	MN	56634-0028
GUY F ATKINSON CONSTRUCTION LLC	7500 OLD GEORGETOWN RD STE 8		BETHESDA	MD	20814-6805
GUY ROOFING INC	201 JONES RD		SPARTANBURG	SC	29307-5424
GWR CONTRACTING LLC	PO BOX 155		EAST BOSTON	MA	02128-0009

Run Date : 7/2/2018 6:32:41 AM

EI0130

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Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
GYPSUM FLOORS OF AR/OK INC	PO BOX 1707		MULDROW	OK	74948-1707
H & H DRYWALL SPECIALTIES INC	3727 E 31ST ST		TULSA	OK	74135-1506
H & H SYSTEMS AND DESIGN, INC	135 W MARKET ST		NEW ALBANY	IN	47150-3561
H & M HEAVY EQUIPMENT REPAIR INC	6121 MARINE RD		ALHAMBRA	IL	62001-2021
H & M INDUSTRIAL SERVICES INC	PO BOX 200		JACKSON	TN	38302-0200
H AND M CONSTRUCTION CO INC	PO BOX 200		JACKSON	TN	38302-0200
HABASIT AMERICA INC	2670 LEISCZS BRIDGE RD UNIT 200		LEESPORT	PA	19533-9433
HABCO INC	248 E BERG RD		SALINA	KS	67401-8907
HAIER PLUMBING & HEATING INC	301 N ELKTON ST		OKAWVILLE	IL	62271-1896
HALL CONTRACTING OF KENTUCKY INC	PO BOX 37270		LOUISVILLE	KY	40233-7270
HAMON CUSTODIS INC	PO BOX 1500		SOMERVILLE	NJ	08876-1251
HANNA DESIGN GROUP INC	650 E ALGONQUIN RD STE 405		SCHAUMBURG	IL	60173-3853
HANSEN RICE INC	1717 E CHISHOLM DR		NAMPA	ID	83687-6846
HARBOUR CONSTRUCTION INC	2717 S 88TH ST		KANSAS CITY	KS	66111-1757
HARCO SERVICES LLC	PO BOX 2347		KENNESAW	GA	30156-9105
HAREN & LAUGHLIN RESTORATION COMPANY INC	8035 NIEMAN RD		LENEXA	KS	66214-1544

Run Date : 7/2/2018 6:32:41 AM

E10130

Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
HAROLD COFFEY CONSTRUCTION CO INC	2317 S 7TH ST		HICKMAN	KY	42050-1835
HARVEY NASH INC	1680 ROUTE 23 STE 300		WAYNE	NJ	07470-7520
HASTCO INC	2801 NW BUTTON RD		TOPEKA	KS	66618-1457
HAWKEYE INSULATION SPECIALISTS INC	755 64TH AVENUE CT SW STE A		CEDAR RAPIDS	IA	52404-7001
HAWKINS CONSTRUCTION COMPANY	PO BOX 9008		OMAHA	NE	68109-0008
HAYES MODULAR GROUP INC	8108 N FM 973		AUSTIN	TX	78724-7227
HEADWATERS CONSTRUCTION COMPANY	639 W 9500 S STE 1		VICTOR	ID	83455-5408
HEAFNER CONTRACTING INC	27457 HEAFNER DR		GODFREY	IL	62035-3635
HEALY CONSTRUCTION SERVICES INC	14000 KEELEER AVE		CRESTWOOD	IL	60418-2352
HEARTLAND MASONRY INC	5400 NW ARROYO DR		TOPEKA	KS	66618-3131
HEARTLAND RETAIL CONSTRUCTION INC	4956 MEMCO LN STE A		RACINE	WI	53404-1160
HEIDELBERG ENGINEERING INC	10 FORGE PKWY STE 1		FRANKLIN	MA	02038-3137
HEINEN CUSTOM OPERATIONS INC	PO BOX 182		VALLEY FALLS	KS	66088-0182
HEINTZ POOL & SPA COMPANY	453 MARKETPLACE DR		FREEBURG	IL	62243-4076
HELLAS CONSTRUCTION INC	12710 RESEARCH BLVD STE 240		AUSTIN	TX	78759-4319
HENSON CONSTRUCTION LLC	11501 PLANTSIDE DR STE 9		LOUISVILLE	KY	40299-6334

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

E10130

Taxation Division

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
HERBST ROBINETTE CONSTRUCTION CO	307 E 39TH ST		S SIOUX CITY	NE	68776-3605
HICKEY CONTRACTING COMPANY	PO BOX 68		KEOKUK	IA	52632-0068
HIGH CONCRETE GROUP LLC	PO BOX 10008		LANCASTER	PA	17605-0008
HIGHLAND STEEL ERECTORS INC	PO BOX 590		HELENWOOD	TN	37755-0590
HILBERS INC	1210 STABLER LN		YUBA CITY	CA	95993-2620
HILL DB LLC	234 MAIN ST		KELLER	TX	76262
HILLARD ELECTRIC INC	4099 CEDAR COMMERCIAL DR NE		CEDAR SPRINGS	MI	49319-8296
HODESS CONSTRUCTION CORPORATION	100 JOHN L DIETSCH SQ		N ATTLEBORO	MA	02763-1028
HOFFMANN INC	6001 49TH ST S		MUSCATINE	IA	52761-1153
HOHL INDUSTRIAL SERVICES INC	770 RIVERVIEW BLVD STE 1		TONAWANDA	NY	14150-7880
HOLDER CONSTRUCTION	3333 RIVERWOOD PKWY SE STE 400		ATLANTA	GA	30339-3304
HOLLAND CONSTRUCTION SERVICES, INC.	4495 N ILLINOIS ST STE E		SWANSEA	IL	62226-1005
HOME CENTER CONSTRUCTION INC	420 W ATKINSON RD		PITTSBURG	KS	66762-8634
HORIZON GENERAL CONTRACTORS INC	7315 W ELIZABETH LN		FT WORTH	TX	76116-6444
HORIZONTAL BORING & TUNNELING CO	PO BOX 429		EXETER	NE	68351-0429
HOWARD IMMEL INC	1820 RADISSON ST		GREEN BAY	WI	54302-2057
HPI LLC	15503 W HARDY RD		HOUSTON	TX	77060-3603

Run Date : 7/2/2018 6:32:41 AM

EI0130

Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
HUEGERICH CONSTRUCTION INC	PO BOX 891		GRETNA	NE	68028-0891
HUSTON CONTRACTING INC	PO BOX 74		OLATHE	KS	66051-0074
HUTTON CONTRACTING CO INC	1600 CLIFTY HWY		HINDSVILLE	AR	72738-9167
HYDRA-LUBE	PO BOX 16565		LAKE CHARLES	LA	70616-6565
HYDRO TECHNOLOGIES INC	6200 E HIGHWAY 62 UNIT 100		JEFFERSONVILLE	IN	47130-8769
HYDROCHEM LLC	900 GEORGIA AVE		DEER PARK	TX	77536-2518
ICON INDUSTRIAL SERVICES LLC	5104 J ST SW		CEDAR RAPIDS	IA	52404-4919
IDEAL BUSINESS SOLUTIONS LLC	31 BOLAND CT		GREENVILLE	SC	29615-5730
ILLINI DRILLED FOUNDATIONS INC	PO BOX 1351		DANVILLE	IL	61834-1351
IMPACT INSTALLATIONS INC	10091 STREETER RD STE 9		AUBURN	CA	95602-8512
IMPERIAL CRANE SERVICES INC	7500 IMPERIAL DR		BRIDGEVIEW	IL	60455-2395
IMPERIAL ROOF SYSTEMS CO	PO BOX 522		WEST UNION	IA	52175-0522
INDUSTRIAL INSULATION SERVICES INC	2200 W 6TH AVE		EL DORADO	KS	67042-3166
INDUSTRIAL MAINTENANCE CONTRACTORS INC	2301 GARDEN CITY HWY		MIDLAND	TX	79701-1549
INDUSTRIAL MAINTENANCE OF TOPEKA INC	4501 NW US HIGHWAY 24		TOPEKA	KS	66618-3809
INDUSTRIAL ROOFING & CONSTRUCTION LLC	1128 HIGHWAY 2		STERLINGTON	LA	71280-3066

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

EI0130

Taxation Division

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
INDUSTRIAL STEEL ERECTORS INC	2728 N CLARK ST		DAVENPORT	IA	52804-1300
INDUSTRY SERVICES CO INC	6265 RANGELINE RD		THEODORE	AL	36582-5245
INFRASTRUCTURE ENGINEERS INC	12596 W BAYAUD AVE STE 300		LAKEWOOD	CO	80228-2031
INGRAM CONSTRUCTION COMPANY INC OF MADISON MISSISS	PO BOX 1609		MADISON	MS	39130-1609
INK CONSTRUCTION LLC	8335 E KELLOGG DR		WICHITA	KS	67207-1839
INNOVATIVE COMBUSTION TECHNOLOGIES INC	10 COMMERCE DR		PELHAM	AL	35124-1847
INNOVATIVE CONSTRUCTION SOLUTIONS INC	21675 GATEWAY RD		BROOKFIELD	WI	53045-5137
INNOVATIVE SOLUTIONS IN SIGNALING CONSULTANTS	108 S MADISON AVE STE 200		LOUISVILLE	KY	40243-1473
INSULATED PANEL COMPANY	421 N PAULINA ST		CHICAGO	IL	60622-6684
INSULATION TECHNOLOGIES INC	2007 BUTTON LN		LA GRANGE	KY	40031-8726
INTEGRATED ENVIRONMENTAL SERVICES INC	PO BOX 490815		BLAINE	MN	55449-0815
INTEGRATED POWER CO	PO BOX 1743		NORTH PLATTE	NE	69103-1743
INTEGRATED SERVICE COMPANY	1900 N 161ST EAST AVE		TULSA	OK	74116-4829
INTERCON CONSTRUCTION INC	5512 STATE ROAD 19 AND 113		WAUNAKEE	WI	53597-9530
INTERMOUNTAIN SLURRY SEAL INC	PO BOX 50085		WATSONVILLE	CA	95077-5085

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

EI0130

Taxation Division

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
INTERNATIONAL CONTRACTORS INC	977 S IL ROUTE 83		ELMHURST	IL	60126-4966
INTERNATIONAL INDUSTRIAL CONTRACTING CORPORATION	35900 MOUND RD		STERLING HTS	MI	48310-4793
INTERNATIONAL METAL FUSION CORPORATION	900 NW 10TH AVE		FT LAUDERDALE	FL	33311-7114
IOWA TRENCHLESS LC	PO BOX 846		PANORA	IA	50216-0846
IVS HYDRO INC	PO BOX 245		WAVERLY	WV	26184-0245
J & D CONSTRUCTION INC	4326 HIGHWAY 212		MONTEVIDEO	MN	56265-4536
J F BRENNAN COMPANY INC	PO BOX 2557		LA CROSSE	WI	54602-2557
J WILKINSON INC	2964 PETTICOAT JUNCTION LN		GLEN CARBON	IL	62034-3265
J.E.D. INSTALLATION LLC	2722 N 155TH ST		BASEHOR	KS	66007-9253
JACK R GAGE REFRIGERATION INC	700 W 1700 S BLDG 29104		LOGAN	UT	84321-6541
JACKOVIC CONSTRUCTION COMPANY LLC	300 MOUNT LEBANON BLVD STE 211A		PITTSBURGH	PA	15234-1534
JACKSON DEAN CONSTRUCTION INC	3414 S 116TH ST		TUKWILA	WA	98168-1983
JACOBS LADDER INC	2325 COBDEN SCHOOL RD		COBDEN	IL	62920-3489
JAKES ELECTRIC LLC	207 ALLEN ST		CLINTON	WI	53525-9498
JAMES AGRESTA CARPENTRY, INC.	150 ENGLISH ST		HACKENSACK	NJ	07601-3937
JAMES HUNT CONSTRUCTION CO INC	1865 SUMMIT RD		CINCINNATI	OH	45237-2803
JAMES MCHUGH CONSTRUCTION CO	1737 S MICHIGAN AVE		CHICAGO	IL	60616-1211

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

EI0130

Taxation Division

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
JAMES N GRAY CONSTRUCTION CO INC	PO BOX 8330		LEXINGTON	KY	40533-8330
JANSEN ELECTRIC COMPANY	4421 N 60TH ST		QUINCY	IL	62305-0640
JARRETT INDUSTRIES INC	PO BOX 87189		SOUTH ROXANA	IL	62087-7189
JASON TANKING CONSTRUCTION LLC	PO BOX 3969		LAWRENCE	KS	66046-0969
JAY MCCONNELL CONSTRUCTION INC	5721 GEORGIA AVE		KANSAS CITY	KS	66104-2937
JAY TON CONSTRUCTION CO INC	PO BOX 142		BURLISON	TN	38015-0142
JAYEFF CONSTRUCTION CORPORATION	2310 HIGHWAY 34 STE 1A		MANASQUAN	NJ	08736-1400
JDH CONTRACTING INC	8109 NETWORK DR		PLAINFIELD	IN	46168-9024
JEN MECHANICAL INC	803 HOPP HOLLOW DR		ALTON	IL	62002-4204
JESCO INC	2020 MCCULLOUGH BLVD		TUPELO	MS	38801-7108
JETTON GENERAL CONTRACTING INC	1211 CARROLL RD		PARAGOULD	AR	72450-6088
JF EDWARDS CONSTRUCTION COMPANY	220 S CHICAGO ST		GENESEO	IL	61254-1456
JIM BROWN CONSTRUCTION COMPANY INC	PO BOX 2218		MOUNTAIN HOME	AR	72654-2218
JOE R JONES CONSTRUCTION INC	PO BOX 873		WEATHERFORD	TX	76086-0873
JOHN A PAPALAS & CO INC	1187 EMPIRE AVE		LINCOLN PARK	MI	48146-2099
JOHN E GREEN COMPANY	220 VICTOR ST		HIGHLAND PARK	MI	48203-3116
JOHNSONS BUILDERS	1455 HODGES FERRY RD		DOYLE	TN	38559-3001
JONES HYDROBLAST INC	PO BOX 309		ROYALTON	IL	62983-0309

Run Date : 7/2/2018 6:32:41 AM

E10130

Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
JRCT INCORPORATED	2098 TOM AUSTIN HWY		GREENBRIER	TN	37073-5192
JVR CONSTRUCTION COMPANY INC	4600 E 53RD ST		DAVENPORT	IA	52807-3479
JVT ADVISORS	35 NEW ENGLAND BUS CNTR		ANDOVER	MA	01810
K & M CONCRETE CONSTRUCTION INC	PO BOX 236		EDGERTON	MN	56128-0236
KADILEX CONSTRUCTION INC	PO BOX 348		WOOD RIVER	IL	62095-0348
KAISER ELECTRICAL CONTRACTORS INC	340 ERIE AVE		MORTON	IL	61550-9600
KALMAN FLOOR COMPANY	15710 W COLFAX AVE STE 202		GOLDEN	CO	80401-7405
KAMADULSKI EXCAVATING & GRADING CO INC	4336 HIGHWAY 162		GRANITE CITY	IL	62040-6409
KANSAS TURF LLC	601 E WYANDOTTE ST		MERIDEN	KS	66512-9169
KARR TUCKPOINTING LLC	PO BOX 417		VINTON	IA	52349-0417
KASBOHM CUSTOM DRILLING INC	11404 OAKTON RD		SAVANNA	IL	61074-8636
KASPARIE CONSTRUCTION COMPANY	1500 MAAS RD		QUINCY	IL	62305-0436
KBC INC	11404 OAKTON RD		SAVANNA	IL	61074-8636
KBS AGRI SYSTEMS LLC	255 COUNTY ROAD R		NAPOLEON	OH	43545-5748
KBS CONSTRUCTORS INC	1701 SW 41ST ST		TOPEKA	KS	66609-1252
KC DOORS INC	N57W13556 REICHERT AVE		MENOMONEE FLS	WI	53051-6106
KEA CONSTRUCTORS LLC	PO BOX M		MILFORD	NE	68405-0623
KEELEY & SONS INC	6303 COLLINSVILLE RD		E SAINT LOUIS	IL	62201-2523

Run Date : 7/2/2018 6:32:41 AM

EI0130

Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
KEEN COMPANY INC	PO BOX 2143		INDIANAPOLIS	IN	46206-2143
KELLY CONSTRUCTION GROUP INC	6985 W 153RD ST		OVERLAND PARK	KS	66223-3116
KEMBER FLOORING INC	5401 S GRAHAM RD		SAINT CHARLES	MI	48655-8584
KEMNER E.I.F.S., INC	PO BOX 41		QUINCY	IL	62306-0041
KENDALL CONSTRUCTION INC	2551 NW BUTTON RD		TOPEKA	KS	66618-1411
KENEWICK LLC	2107 W HARRY ST		WICHITA	KS	67213-3253
KENT COMPANIES TEXAS LLC	830 VALLEY RIDGE BLVD		LEWISVILLE	TX	75057-3319
KEOKUK CONTRACTORS INC	853 JOHNSON STREET RD		KEOKUK	IA	52632-2213
KES CONSTRUCTION LLC	11184 ANTIOCH RD # 354		OVERLAND PARK	KS	66210-2420
KING MECHANICAL CONTRACTORS INC	PO BOX 16608		CHATTANOOGA	TN	37416-0608
KING OF TEXAS ROOFING COMPANY LP	307 GILBERT CIR		GRAND PRAIRIE	TX	75050-6579
KINLEY CONSTRUCTION GROUP LP	7301 COMMERCIAL BLVD E		ARLINGTON	TX	76001-7149
KLAVER CONSTRUCTION COMPANY INC	PO BOX 9163		WICHITA	KS	67277-0163
KNUTSON BROTHERS INC	PO BOX 353		REDWOOD FALLS	MN	56283-0353
KOOPS INC	987 PRODUCTIONS CT		HOLLAND	MI	49423-9219
KORTE & LUITJOHAN CONTRACTORS INC	12052 HIGHLAND RD		HIGHLAND	IL	62249-1342
KOSS CONSTRUCTION COMPANY	5830 SW DRURY LN		TOPEKA	KS	66604-2262
KRUSE CORPORATION	8971 GREEN VALLEY DR UNIT 1		MANHATTAN	KS	66502-9008

Run Date : 7/2/2018 6:32:41 AM

EI0130

Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
KRYSTAL COMPANIES LLC	6830 W 152ND TER		OVERLAND PARK	KS	66223-3127
KUHLMAN REFRIGERATION INC	N56W16865 RIDGEWOOD DR # 100		MENOMONEE FLS	WI	53051-5656
LABCON INC	PO BOX 535324		GRAND PRAIRIE	TX	75053-5324
LAKEVIEW CONSTRUCTION OF WISCONSIN INC	10505 CORPORATE DR STE 200		PLEASANT PR	WI	53158-1605
LAND ART LANDSCAPING INC	12429 HOWE DR		LEAWOOD	KS	66209-1451
LAND EXCAVATING AND DEMOLITION LLC	5905 W O ST		LINCOLN	NE	68528-9171
LANEY DIRECTIONAL DRILLING CO	831 CROSSBRIDGE DR		SPRING	TX	77373-3501
LANGHAUSER SHEET METAL CO	120 MATTER DR		HIGHLAND	IL	62249-1271
LANHAM INSULATION INC	13127 MDDLTWN IND BLVD STE A		LOUISVILLE	KY	40223-4800
LARSON HARVESTING INC	447 SUNFLOWER RD		WATERVILLE	KS	66548-8904
LATSHAW DRILLING COMPANY, LLC	PO BOX 691017		TULSA	OK	74169-1017
LAYTON CONSTRUCTION COMPANY LLC	9090 S SANDY PKWY		SANDY	UT	84070-6409
LEANTRAK INC	1645 INDIAN WOOD CIR STE 101		MAUMEE	OH	43537-4419
LEE COMPANY	331 MALLORY STATION RD		FRANKLIN	TN	37067-8257
LEICK CONSTRUCTION INC	22027 221ST ST		GLENWOOD	IA	51534-5389
LEISURE CONSTRUCTION & RENOVATION LLC	PO BOX 11546		PRAIRIE VLG	KS	66207-4246
LEJAS CORPORATION	6202 S MAPLE AVE		TEMPE	AZ	85283-2861

Run Date : 7/2/2018 6:32:41 AM

EI0130

Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
LEVELOPS INC	36 NE 52ND ST		OKLAHOMA CITY	OK	73105-1826
LIGHTNING PROTECTION SYSTEMS LLC	PO BOX 540445E		N SALT LAKE	UT	84054-0445
LM WIND POWER SERVICE AMERICAS INC	1580 S 48TH ST		GRAND FORKS	ND	58201-3808
LOCKE EQUIPMENT SALES CO INC	PO BOX 243		SHAWNEE MSN	KS	66201-0243
LOELLEKE PLUMBING INC	22974 E COUNTY RD		JERSEYVILLE	IL	62052-3174
LONE STAR RAILROAD CONTRACTORS INC	PO BOX 1150		ENNIS	TX	75120-1150
LONG ELECTRIC LLC	924 CONGRESS CIR		JONESBORO	AR	72401-2546
LONGHORN EXCAVATORS INC	1819 FIRST OAKS ST STE 140		RICHMOND	TX	77406-1444
LONGS DRILLING SERVICE INC	10554 HIGHWAY 392 W		HARRISON	AR	72601-7771
LOTEMP EQUIPMENT COMPANY	8707 N 29TH ST		OMAHA	NE	68112-1848
LOUK AG SERVICES LLC	506 E RUSSELL ST		JEFFERSON	IA	50129-4700
LOYD BUILDERS INC	PO BOX 266		OTTAWA	KS	66067-0266
LSX CONSTRUCTION LLC	34605 W 255TH ST		PAOLA	KS	66071-4213
LUCAS INC	12525 ANTIOCH RD STE 102		OVERLAND PARK	KS	66213-2001
LUEDER CONSTRUCTION COMPANY	9999 J ST STE B		OMAHA	NE	68127-1125
LUND ROSS CONSTRUCTORS INC	4601 F ST		OMAHA	NE	68117-1403
LYNN ELECTRIC & COMMUNICATIONS, INC.	725 N 2ND ST STE K		LAWRENCE	KS	66044-1442

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

E10130

Taxation Division

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
M & J ELECTRIC OF WICHITA LLC	1444 S SAINT CLAIR AVE BLDG D		WICHITA	KS	67213-2938
M & L ELECTRICAL INC	6060 SCOTTSVILLE RD		BOWLING GREEN	KY	42104-0388
M & W CONTRACTORS INC	PO BOX 2510		EAST PEORIA	IL	61611-0510
M CHEMICAL COMPANY INC	825 COLORADO BLVD STE 214		LOS ANGELES	CA	90041-1732
M CON LLC	PO BOX 62		WATHENA	KS	66090-0062
M.G. DYESS INC	7159 HIGHWAY 35		BASSFIELD	MS	39421-9678
M4 CONSTRUCTION LLC	6497 DEEP VALLEY CT		FLOWERY BR	GA	30542-6638
MAAS CONSTRUCTION INC	3615 SAINT ANTHONY RD		QUINCY	IL	62305-8121
MACDOUGALL PIERCE CONSTRUCTION INC	12720 FORD DR		FISHERS	IN	46038-2893
MACHINE REPAIR INTERNATIONAL	2526 MANKAS CORNER RD		FAIRFIELD	CA	94534-3134
MACON GC LLC	201 BONITA AVE		BRADFORD	IL	61421-5305
MAGNUM ELECTRIC OF MISSOURI INC	471 CHRISTIANSON DR		WEST FARGO	ND	58078-8304
MAHANEY ROOFING COMPANY INC	2822 N MEAD ST		WICHITA	KS	67219-4241
MAJOR REFRIGERATION CO INC	314 W NORTHWESTERN AVE		NORFOLK	NE	68701-6404
MANATTS INC	PO BOX 535		BROOKLYN	IA	52211-0535
MAPP CONSTRUCTION LLC	344 3RD ST		BATON ROUGE	LA	70801-1307
MARION FIRE SPRINKLER & ALARM INC	PO BOX 386		MARION	IL	62959-0386
MASONS LANDSCAPING & CONSTRUCTION SERVICES INC	1716 TUDOR AVE		E SAINT LOUIS	IL	62207-2120

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

EI0130

Taxation Division

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
MASTER MILLWORK INC	11603 CANYON RDE		PUYALLUP	WA	98373-4361
MAX TRUE FIREPROOFING CO	PO BOX 1029		JENKS	OK	74037-1029
MAXCOR INC	PO BOX 1354		PERRY	GA	31069-1354
MAYHEWS MECHANICAL COMMERCIAL REFRIGERATION INC	PO BOX 17955		N LITTLE ROCK	AR	72117-0955
MC ELECTRIC INC	7648 LL RD		RED BUD	IL	62278-2522
MCAFEH HENDERSON SOLUTIONS INC	PO BOX 397		OSKALOOSA	KS	66066-0397
MCCLAIN & CO INCORPORATED OF VIRGINIA	19152 GERMANNA HWY		CULPEPER	VA	22701-6023
MCELROY ELECTRIC INC	3300 SW TOPEKA BLVD STE 1		TOPEKA	KS	66611-2275
MCPHERSON CONTRACTORS INC	3501 SW FAIRLAWN RD		TOPEKA	KS	66614-3976
MCSHANE CONSTRUCTION COMPANY LLC	9550 W HIGGINS RD STE 200		ROSEMONT	IL	60018-4906
MECHANICAL CONSTRUCTION SERVICES INC	PO BOX 335		NEWARK	AR	72562-0335
MERRICK UNDERGROUND CONSTRUCTION LLC	4003 DEER CROSSING DR		JANESVILLE	WI	53546-4275
MEYER CONTRACTING	11000 93RD AVE N		MAPLE GROVE	MN	55369-4113
MEYLAN INDUSTRIAL SERVICES INC	3919 S 147TH ST STE 124		OMAHA	NE	68144-5579
MICHIGAN COMMERCIAL CONTRACTORS INC	16745 COMSTOCK ST		GRAND HAVEN	MI	49417-7949

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

Taxation Division

EI0130

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
MID AMERICA MILLING COMPANY LLC	6200 E HIGHWAY 62 UNIT 100		JEFFERSONVILLE	IN	47130-8769
MID AMERICA PIPELINE CONSTRUCTION INC	PO BOX 1830		CATOOSA	OK	74015-1830
MID SOUTH INDUSTRIAL INC	PO BOX 609		BELLS	TN	38006-0609
MID STATES INDUSTRIAL INC	519 SHIPYARD RD		SENECA	IL	61360-9203
MIDDENDORF AND REUSS CONSTRUCTION INC	800 S BREEZE STREET STE 1		WATERLOO	IL	62298
MIDLAND INDUSTRIAL SERVICE LLC	2953 S HONEYSUCKLE LN		ROGERS	AR	72758-4615
MIDLAND RESTORATION COMPANY INC	2159 INDIAN RD		FORT SCOTT	KS	66701-8732
MIDSOUTH SPECIALTY CONSTRUCTION LLC	5731 OSBOURNE RD		SAINT JOE	AR	72675-1297
MIDWEST COATING INC	3830 NW 16TH ST		TOPEKA	KS	66618-2846
MIDWEST COOLING TOWERS INC	1156 E HIGHWAY 19		CHICKASHA	OK	73018-6347
MIDWEST CUSTOM POOLS LLC	600 LINCOLN ST		LAWRENCE	KS	66044-5349
MIDWEST MASONRY CONSTRUCTION INC	5606 SW TOPEKA BLVD STE C		TOPEKA	KS	66609-1010
MIDWEST MECHANICAL INDUSTRIAL SERVICES	PO BOX 164		LOGAN	IA	51546-0164
MIDWEST MOLE INC	6814 W 350 N		GREENFIELD	IN	46140-9617
MIDWEST MOWING INC	2450 OWENS LN		BRIGHTON	IL	62012-1550
MIDWEST REBAR LLC	6988 BUFFALO RD		MOUNTAIN HOME	AR	72653-7722
MIKES HEATING AND COOLING	PO BOX 273		EAST CARONDELET	IL	62240-0273

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

Taxation Division

EI0130

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
MILESTONE CONSTRUCTION COMPANY LLC	2002 S 48TH ST		SPRINGDALE	AR	72762-5772
MILLER INSULATION CO INC	3520 E CENTURY AVE		BISMARCK	ND	58503-0739
MINERAL FABRICATION & MACHINE CO INC	PO BOX 21		KEYSER	WV	26726-0021
MINNESOTA LIMITED LLC	PO BOX 410		BIG LAKE	MN	55309-0410
MIRA ENTERPRISES	9500 IH 20		EASTLAND	TX	76448-5739
MIRON CONSTRUCTION CO INC	PO BOX 509		NEENAH	WI	54957-0509
MISSION MASONRY	7737 MISSION RD		PRAIRIE VLG	KS	66208-4231
MIXER SYSTEMS INC	PO BOX 10		PEWAUKEE	WI	53072-0010
MJM SERVICES CONSTRUCTION INC	PO BOX 24006		BELLEVILLE	IL	62223-9006
MKR SERVICES INC	3849 LAKE MICHIGAN DR NW		GRAND RAPIDS	MI	49534-4520
MLA GEOTHERMAL DRILLING LLC	205 HACKBERRY DR		GRETNA	NE	68028-4429
MODERN BUSINESS ASSOCIATES V INC	9455 KOGER BLVD N STE 200		ST PETERSBURG	FL	33702-2465
MODERN PIPING	500 WALFORD RD		CEDAR RAPIDS	IA	52404-8921
MODIFIED CONCRETE SUPPLIES LLC	6200 E HIGHWAY 62 BLDG 2501		JEFFERSONVILLE	IN	47130-8769
MOLIN CONCRETE PRODUCTS CO INC	415 LILAC ST		LINO LAKES	MN	55014-1098
MOLLERS NORTH AMERICA INC	5215 52ND ST SE		GRAND RAPIDS	MI	49512-9702
MONTGOMERY HOFFMAN ASSOCIATES	4400 SW HOLLY LN		TOPEKA	KS	66604-1933

Run Date : 7/2/2018 6:32:41 AM

EI0130

Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
MOORE ASPHALT INCORPORATED	1 COMMERCIAL ST		MILLSTADT	IL	62260-2057
MORRISON BROS CONSTRUCTION COMPANY	2134 N 81ST ST		CASEYVILLE	IL	62232-1604
MORRISSEY CONTRACTING CO	PO BOX 67		GODFREY	IL	62035-0067
MOSS ROOFING & INSULATION INC	310 HIGHWAY 150 S		WEST UNION	IA	52175-1505
MOUNTAIN STATES ROOFING INC	413 E 41ST ST		GARDEN CITY	ID	83714-6310
MTD ELECTRIC LLC	22004 S WAVERLY RD		SPRING HILL	KS	66083-4548
MUELLER CONTRACTING LLC	PO BOX 10		MAEYSTOWN	IL	62256-0010
MULTATECH ENGINEERING INC	2821 W 7TH ST STE 400		FORT WORTH	TX	76107-8913
MUNICIPAL PIPE SERVICES INC	1550 NE 51ST AVE		DES MOINES	IA	50313-2123
MUNICIPAL PIPE TOOL COMPANY LLC	515 5TH ST		HUDSON	IA	50643-7773
MUNIE TRENCHING & EXCAVATING	1818 PINE ST		HIGHLAND	IL	62249-2526
MV RESIDENTIAL CONSTRUCTION INC	9349 WATERSTONE BLVD STE 200		CINCINNATI	OH	45249-8325
MYLES LORENTZ INC	48822 OLD RIVER BLUFF RD		SAINT PETER	MN	56082-5059
NATIONAL BRIDGE	514 ANCLOTE RD		TARPON SPGS	FL	34689-6701
NATIONAL ERECTORS & BUILDERS INC	13739 KAYSER RD		HIGHLAND	IL	62249-4619
NATIONAL ROOFING & SHEET METAL CO	G4130 FLINT ASPHALT DRIVE		BURTON	MI	48529

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

EI0130

Taxation Division

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
NATIONAL SERVICE SOLUTIONS US INC	101 GRANT WAY		MOXEE	WA	98936-9787
NATIONAL WELDING CORPORATION	7025 S COMMERCE PARK DR		MIDVALE	UT	84047-1090
NATIONWIDE FENCE & SUPPLY COMPANY	69951 LOWE PLANK RD		RICHMOND	MI	48062-5365
NBMC INC	PO BOX 300		GREENBRIER	AR	72058-0300
NEBRASKA ELECTRICAL SERVICES LLC	5030 S 135TH ST		OMAHA	NE	68137-1606
NELSON INDUSTRIAL SERVICES INC	6021 MELROSE LN		OKLAHOMA CITY	OK	73127-5527
NEMAHA LANDSCAPE CONSTRUCTION INC	430 W PIONEERS BLVD		LINCOLN	NE	68522-2245
NEW STAR COMMUNICATIONS INTERNATIONAL INC	125 E MAIN ST # 202		AMERICAN FORK	UT	84003-2407
NEW TEAM LLC	1 W LAS OLAS BLVD FL 4		FT LAUDERDALE	FL	33301-1852
NEW TECH CONSTRUCTION INC	PO BOX 39		NEBRASKA CITY	NE	68410-0039
NEW WAVE POOLS & SPAS INC	13312 GILES RD		OMAHA	NE	68138-3467
NEXUS 5 GROUP LLC	6800 W 64TH ST		OVERLAND PARK	KS	66202-4100
NORMENT SECURITY GROUP INC	2511 MIDPARK RD		MONTGOMERY	AL	36109-1407
NORTH AMERICAN ROOFING SERVICES INC	14025 RIVEREDGE DR STE 600		TAMPA	FL	33637-2088
NORTH AMERICAN SUBSTATION SERVICES LLC	PO BOX 161626		ALTAMONTE SPG	FL	32716-1626
NORTH CENTRAL SERVICE INC	PO BOX 310		BEMIDJI	MN	56619-0310

Run Date : 7/2/2018 6:32:41 AM

EI0130

Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
NORTH MISSISSIPPI CONVEYOR COMPANY INC	PO BOX 1375		OXFORD	MS	38655-1375
NORTHERN CLEARING INC	28190 STATE HIGHWAY 137		ASHLAND	WI	54806-4601
NORTHERN VENTURES INCORPORATED	823 OSAGE AVE		KANSAS CITY	KS	66105-1929
NORTHLAND ELECTRICAL SERVICES LLC	1705 ORVILLE DR		NEW LONDON	WI	54961-9219
NORTHSTAR DEMOLITION & REMEDICATION LP	404 N BERRY ST		BREA	CA	92821-3104
NORTHWEST AG SYSTEMS INC	2498 CARROLL AVE		SALIX	IA	51052-8097
NOVINIUM INC	22820 RUSSELL RD		KENT	WA	98032-4892
NUTRI-JECT SYSTEMS INC	PO BOX 398		HUDSON	IA	50643-0398
NWA GARAGE SOLUTIONS, INC.	PO BOX 387		ROGERS	AR	72757-0387
O AND J COATINGS INC	441 FIELDWOOD TER		HURST	TX	76053-3909
OLYMPUS PAINTING CONTRACTORS INC	556 ANCLOTE RD		TARPON SPGS	FL	34689-6701
ON AIR SOLUTIONS INC	10020 FAIRBANKS N HOUSTON RD		HOUSTON	TX	77064-3404
ONEALS ELECTRIC HEATING & COOLING INC	2700 BAUGHMAN CUTOFF RD		HARRISON	AR	72601-6720
ORASURE TECHNOLOGIES INC	220 E 1ST ST		BETHLEHEM	PA	18015-1360
OSMENT ROOFING SYSTEMS INC	4201 E NETTLETON AVE		JONESBORO	AR	72401-5560
OTC SERVICES INC	PO BOX 188		LOUISVILLE	OH	44641-0188
OTTO BAUM COMPANY INC	866 N MAIN ST		MORTON	IL	61550-1645

Run Date : 7/2/2018 6:32:41 AM

EI0130

Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
OUTDOOR SYSTEMS INC	660 STATE ROUTE 158		COLUMBIA	IL	62236-3232
P&P ARTEC INC	700 CREEL DR		WOOD DALE	IL	60191-2608
PAINT PRO OF MISSOURI INC	6930 W 152ND TER		OVERLAND PARK	KS	66223-3125
PAR RESTORATION SERVICES INC	120 S CENTRAL AVE		CLAYTON	MO	63105-1705
PARAGON INTERNATIONAL INC	2885 N BERKELEY LAKE RD NW STE 17		DULUTH	GA	30096-4343
PARK CONSTRUCTION MIDWEST INC	1481 81ST AVE NE		MINNEAPOLIS	MN	55432-1795
PARKWAY C&A LP	1000 CIVIC CIR		LEWISVILLE	TX	75067-3493
PARSONS PROJECT SERVICES INC	16055 SPACE CENTER BLVD STE 725		HOUSTON	TX	77062-6269
PATRIOT DRYWALL COMPANY INC	19925 W 161ST ST STE B		OLATHE	KS	66062-2788
PAULON CONSTRUCTION MANAGEMENT CORP	13189 OYSTER LAKE RD		HOLLY	MI	48442-7903
PAVEMENT PROS LLC	110 N HARTUP ST		MCPHERSON	KS	67460-4432
PAVEMENT SERVICES CORPORATION	PO BOX 1107		EULESS	TX	76039-1107
PAYNE CONSTRUCTION SERVICES LLC	10565 DOWNTHA LN		BUNKER HILL	IL	62014-2855
PCF CONSTRUCTION CO INC	1311 CART RD		BELLEVILLE	IL	62221-2465
PEERLES COMPACTION GROUTING INC	1200 SW BROOKSIDE CIR STE 15		GRIMES	IA	50111-5141
PEOPLENOW	9000 W SUNSET BLVD STE 900		WEST HOLLYWOOD	CA	90069-5804
PERENNIAL ENVIRONMENTAL I LLC	13100 NORTHWEST FWY STE 160		HOUSTON	TX	77040-6343

Run Date : 7/2/2018 6:32:41 AM

E10130

Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
PERFECT PLAY FIELDS AND LINKS INC	PO BOX 24006		BELLEVILLE	IL	62223-9006
PERFECTION ELECTRIC INC	615 MILL CREEK FARMS RD		TROY	IL	62294-2622
PERFORMANCE CONTRACTORS INC	PO BOX 83630		BATON ROUGE	LA	70884-3630
PERRETT CONSTRUCTION LTD	PO BOX 32		VALENTINE	NE	69201-0032
PETREE CONSTRUCTION	1100 S D ST		FORT SMITH	AR	72901-4510
PETTUS PLUMBING & PIPING INC	PO BOX 1048		ROGERSVILLE	AL	35652-1048
PFEFFERKORN & DRURY CONSTRUCTION LLC	PO BOX 448		PAOLA	KS	66071-0448
PINNACLE CONSTRUCTION OF IOWA INC	PO BOX 368		GLENWOOD	IA	51534-0368
PINNACLE MECHANICAL	PO BOX 133		HORTON	AL	35980-0133
PIPING CONTRACTORS OF KANSAS INC	115 SW JACKSON ST		TOPEKA	KS	66603-3311
PISHNY REAL ESTATE SERVICES LLC	12202 W 88TH ST		LENEXA	KS	66215-4607
PITRE CONSTRUCTION INC	6835 TOWN HALL RD		BELLEVILLE	IL	62223-8623
PLANT MAINTENANCE SERVICE CORPORATION	3000 FITE RD		MILLINGTON	TN	38053-8334
PLYLERS AT YOUR SERVICE INC	10 CREEK ST		BROOKVILLE	PA	15825-1401
P-N-G CONTRACTING INC	917 CARLA DR		TROY	IL	62294-3153
POLY VINYL ROOFING INC	785 ELBOW CREEK RD		MOUNT VERNON	IA	52314-9732
PORTERS COMMERCIAL REFRIGERATION INC	118 RIDGE DR		GREENBRIER	AR	72058-9652

Run Date : 7/2/2018 6:32:41 AM
EI0130
Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
POWER HOME TECHNOLOGIES, LLC	4521 PRESLYN DR		RALEIGH	NC	27616-3178
POWERSECURE INC	1609 HERITAGE COMMERCE CT		WAKE FOREST	NC	27587-4245
PRAIRIE CENTER PLUMBING HEATING & AIR CONDITIONING	242 N MARION ST		OLATHE	KS	66061-3105
PRAIRIE CONTRACTORS INC	9318 GULFSTREAM RD STE C		FRANKFORT	IL	60423-2538
PRECISION FIXTURE INSTALLATION INC	10701 ROYALTON RD STE A		N ROYALTON	OH	44133-4471
PRECISION UTILITIES GROUP INC	5916 E STATE BLVD		FORT WAYNE	IN	46815-7637
PREDICTIVE TECHNOLOGIES INC	18827 570TH AVE		AUSTIN	MN	55912-5986
PREFERRED GLOBAL INC	1360 S 10TH ST		NOBLESVILLE	IN	46060-3828
PRELOAD LLC	4000 TOWER RD		LOUISVILLE	KY	40219-1901
PREMIER SITE SERVICES LLC	100 BRICKERTON ST		COLUMBUS	MS	39701-3608
PREMIER STEEL INC	3248 MARTIN LUTHER KING		ANDERSON	IN	46013
PREMIER WORKFORCE INC	18708 W CATAWBA AVE # 1		CORNELIUS	NC	28031-5615
PRO ALARM LLC	130 N DUNCAN ST		MARINE	IL	62061
PROBST ELECTRIC INC	441 W POWERLINE RD		HEBER CITY	UT	84032-1277
PROCESS EQUIPMENT INC	PO BOX 1607		PELHAM	AL	35124-5607
PROCESS SOLUTIONS INC	1077 DELL AVE STE A		CAMPBELL	CA	95008-6628
PROGRESS CONSTRUCTION OF MISSISSIPPI INC	180 GOODMAN ROAD		SOUTHHAVEN	MS	38671

Run Date : 7/2/2018 6:32:41 AM

EI0130

Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
PROGRESSIVE PLUMBING & PIPING INC	6007 W 8000 S		PAYSON	UT	84651-9724
PROSHOT CONCRETE INC	4158 MUSGROVE DR		FLORENCE	AL	35630-6396
PROSSER WILBERT CONSTRUCTION INC	13730 W 108TH ST		LENEXA	KS	66215-2026
PSF MECHANICAL INC	11621 E MARGINAL WAY S # A		TUKWILA	WA	98168-1965
PSI PROFESSIONAL SURFACE INSTALLATIONS INC	3440 MARINATOWN LN STE 205		N FORT MYERS	FL	33903-7049
PWI CONSTRUCTION INC	3903 W MARTIN AVE		LAS VEGAS	NV	89118-4500
Q AND D CONSTRUCTION INC	PO BOX 10865		RENO	NV	89510-0835
Q3 CONTRACTING INC	3066 SPRUCE ST		LITTLE CANADA	MN	55117-1061
QA TECHNOLOGIES INC	222 S 15TH ST STE 100S		OMAHA	NE	68102-1605
QCI THERMAL SYSTEMS INC	PO BOX 2432		DAVENPORT	IA	52809-2432
QUAD COUNTY AG LLC	PO BOX 216		PATON	IA	50217-0216
QUALITY ELECTRIC OF DOUGLAS COUNTY INC	1011 E 31ST ST		LAWRENCE	KS	66046-5103
QUALITY POLE INSPECTION & MAINTENANCE INC	PO BOX 947		EDNA	TX	77957-0947
QUALITY STRIPING INC	1704 E EUCLID AVE		DES MOINES	IA	50313-4730
QUANDEL ENTERPRISES INC	3003 N FRONT ST		HARRISBURG	PA	17110-1224
R.T.L. CONSTRUCTION MN, INC.	6885 139TH LN NW STE 101		RAMSEY	MN	55303-4917
RAMON J GARCIA CONSTRUCTION	3315 N 115TH ST		KANSAS CITY	KS	66109-3404

Run Date : 7/2/2018 6:32:41 AM

EI0130

Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
RAMPART HYDRO SERVICES LP	530 MOON CLINTON RD STE 4		CORAOPOLIS	PA	15108-3874
RANGER PLANT CONSTRUCTIONAL CO INC	5851 E INTERSTATE 20		ABILENE	TX	79601-7625
RAPID MOLD REMOVAL, LLC	2607 EATON RAPIDS RD		LANSING	MI	48911-6310
RAWLINGS INDUSTRIAL INC	PO BOX 1438		HAMILTON	MT	59840-1438
RE CON COMPANY A TEXAS CORP	12 NE 52ND ST		OKLAHOMA CITY	OK	73105-1888
RECTENWALD BROTHERS CONSTRUCTION INCORPORATED	16 LEONBERG RD		CRANBERRY TWP	PA	16066-3602
REDNOUR STEEL ERECTORS INC	PO BOX 116		CUTLER	IL	62238-0116
REED DILLON & ASSOCIATES LLC	1213 E 24TH ST		LAWRENCE	KS	66046-5128
RELIABLE RELAMPING INC	6459 NASH RD		SARANAC	MI	48881-9608
RELIA TECH INC	2280 SIBLEY CT		EAGAN	MN	55122-1998
REMB CO GEOTECHNICAL CONTRACTORS INC	PO BOX 23009		KNOXVILLE	TN	37933-1009
RENIER CONSTRUCTION CORPORATION	2164 CITYGATE DR		COLUMBUS	OH	43219-3556
RETAIL CONSTRUCTION SERVICES INC	11343 39TH ST N		LAKE ELMO	MN	55042-9586
RETAIL STOREFRONT GROUP INC	PO BOX 1070		LEEDS	AL	35094-0020
RFB CONSTRUCTION CO INC	565 E 520TH AVE		PITTSBURG	KS	66762-6829
RHODEN ROOFING LLC	358 S LAURA ST		WICHITA	KS	67211-1517
RICHARD NACHBAR PLUMBING INC	9053 COTTONWOOD CANYON PL		LENEXA	KS	66219-8174

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

EI0130

Taxation Division

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
RICHARDSON TURNER CONSTRUCTION COMPANY INC	10425 COGDILL RD STE 100		KNOXVILLE	TN	37932-3391
RIEKE GRADING INC	8200 HEDGE LANE TER		SHAWNEE	KS	66227-3037
RIGHT WAY FACILITY SERVICES OF TEXAS LLC	3017 WAITS AVE		FORT WORTH	TX	76109-2329
RITEWAY CONVEYORS INC	2364 HIGHWAY 7		LESTER PRAIRIE	MN	5535
RJ MARTIN NATIONAL CONTRACTING INC	22841 AURORA RD		BEDFORD HTS	OH	44146-1244
RJ MECHANICAL INC	3153 BELWOOD DR		VESTAVIA	AL	35243-5216
RL BISHOP & ASSOCIATES INC	PO BOX 703		MANCHESTER	GA	31816-0703
RL COOLSAET CONSTRUCTION COMPANY	PO BOX 279		TAYLOR	MI	48180-0279
RMS CRANES LLC	1900 E 66TH AVE		DENVER	CO	80229-7424
ROCK REMOVAL RESOURCES LLC	1125 N MILITARY AVE		GREEN BAY	WI	54303-4413
ROCKFORD CONSTRUCTION COMPANY	601 1ST ST NW		GRAND RAPIDS	MI	49504-5517
ROEHL REFRIGERATED TRANSPORT LLC	PO BOX 750		MARSHFIELD	WI	54449-0750
ROLLING PLAINS CONSTRUCTION INC	12331 PEORIA ST		HENDERSON	CO	80640-9650
RON'S SIGN COMPANY	1329 S HANDLEY ST		WICHITA	KS	67213-4316
ROPE PARTNER INC	125 MCPHERSON ST STE B		SANTA CRUZ	CA	95060-5883
ROYAL ROOFING COMPANY INC	2445 BROWN RD		ORION	MI	48359-1810
ROYAL SEAL CONSTRUCTION INC	124 MCMAKIN RD		BARTONVILLE	TX	76226-8499

Run Date : 7/2/2018 6:32:41 AM

EI0130

Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
ROYALTY COMPANIES OF INDIANA INC	2099 E TIPTON ST		SEYMOUR	IN	47274-3567
RP COATINGS INC	PO BOX 327		TROY	IL	62294-0327
RSC CONSTRUCTION INC	1631 INDIAN RD		FORT SCOTT	KS	66701-7790
RSCI	333 W ROSSI ST STE 200		BOISE	ID	83706-3806
RYAN & ASSOCIATES INC	10955 160TH ST		DAVENPORT	IA	52804-9166
RYAN CONTRACTORS INC	9390 7TH ST STE A		RCH CUCAMONGA	CA	91730-5669
RYAN INCORPORATED CENTRAL	PO BOX 206		JANESVILLE	WI	53547-0206
S & K REECE CONSTRUCTION LLC	11501 W 109TH ST		OVERLAND PARK	KS	66210-1235
S & W CONSTRUCTION LLC OF IOWA	109 MOODY DR		HAMBURG	IA	51640-1803
ST COTTER TURBINE SERVICES INC	2167 196TH ST E		CLEARWATER	MN	55320-1660
SAAB NORTH AMERICA INC	20700 LOUDOUN COUNTY PKWY STE 152		ASHBURN	VA	20147-2930
SAFFO CONTRACTORS INC	PO BOX 7035		WILMINGTON	NC	28406-7035
SAMRON MIDWEST CONTRACTING INC	PO BOX 1555		MURPHYSBORO	IL	62966-5055
SARENS	5000 EXECUTIVE PKWY STE 230		SAN RAMON	CA	94583-4341
SATELLITE SERVICES INC	309 S FRONT ST		MARQUETTE	MI	49855-4600
SCHEIDT & BACHMANN USA INC	1001 PAWTUCKET BLVD		LOWELL	MA	01854-1040
SCHEINER COMMERCIAL GROUP INC	18965 BASE CAMP RD STE A-1		MONUMENT	CO	80132-8067

Run Date : 7/2/2018 6:32:41 AM

EI0130

Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
SCHLEIS FLOOR COVERING INC	998 GLORY RD		GREEN BAY	WI	54304-5631
SCHUFF STEEL COMPANY	PO BOX 19028		PHOENIX	AZ	85005-9028
SCHULTZ BROTHERS ELECTRIC CO INC	3030 S 24TH ST # A		KANSAS CITY	KS	66106-4707
SCHUMACHER ELEVATOR COMPANY	1 SCHUMACHER WAY		DENVER	IA	50622-7729
SCHUPPS LINE CONSTRUCTION INC	PO BOX 13655		ALBANY	NY	12212-3655
SCHWEITZER ENGINEERING LABORATORIES INC	2440 NE HOPKINS CT		PULLMAN	WA	99163-5616
SCHWICKERTS TECTA AMERICA LLC	PO BOX 1179		MANKATO	MN	56002-1179
SEAKAY CONSTRUCTION SE CORP	19001 BUCKLODGE RD		BOYDS	MD	20841-9536
SEAMLESS SOLUTIONS LLC	12605 W SANTA FE TRAIL DR		LENEXA	KS	66215
SECURICON LLC	5400 SHAWNEE RD STE 206		ALEXANDRIA	VA	22312-2300
SECURITAS ELECTRONIC SECURITY INC	3800 TABS DR		UNIONTOWN	OH	44685-9564
SEELE INC	24 W 40TH ST FL 12		NEW YORK	NY	10018-1094
SEK HEAT & AIR INC	422 W ATKINSON RD		PITTSBURG	KS	66762-8634
SELECT TECHNOLOGIES INC	8093 GRAPHIC DR NE		BELMONT	MI	49306-9448
SEMA CONSTRUCTION INC	7353 S EAGLE ST		ENGLEWOOD	CO	80112-4223
SEMINOLE EQUIPMENT INC	204 TARPON INDUSTRIAL DR		TARPON SPGS	FL	34689-6801
SENNE AND COMPANY INC	2001 NW US HIGHWAY 24		TOPEKA	KS	66618-1445
SERVICE & INDUSTRIAL REPAIR INC	18097 VAIL RD		PLEASANTON	KS	66075-7503

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

EI0130

Taxation Division

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
SES INFRASTRUCTURE SERVICES LLC	1006 FLOYD CULLER CT STE 6		OAK RIDGE	TN	37830-8022
SEVEN25 LLC	12080 DURBIN DR		CARMEL	IN	46032-8939
SG CONSTRUCTION SERVICES LLC	111 E COURT ST STE 1A		FLINT	MI	48502-1649
SHADE STRUCTURES INC	8505 CHANCELLOR ROW		DALLAS	TX	75247-5519
SHAFFER ENTERPRISES D & T LLC	301 LEONA LN		URSA	IL	62376-1119
SHEET PILING SERVICES LLC	6872 STATE HIGHWAY 66		CUSTER	WI	54423-9608
SHERMCO INDUSTRIES INC	PO BOX 540545		DALLAS	TX	75354-0545
SHIELDWORKS	136 HUD RD		WINCHESTER	KY	40391-9736
SHORTRIDGE CONSTRUCTION COMPANY, INC	3908 N 24TH ST		QUINCY	IL	62305-9628
SIERRA BRAVO CONTRACTORS LLC	7038 STATE HIGHWAY 154		SESSER	IL	62884
SIGN CRAFTERS INC	1508 STRINGTOWN RD		EVANSVILLE	IN	47711-4593
SIGN ME UP OF WISCONSIN LLC	311 FOREST AVE		SHEBOYGAN FLS	WI	53085-2526
SIMON ROOFING AND SHEET METAL CORP	70 KARAGO AVE		YOUNGSTOWN	OH	44512-5949
SKYLINE TECHNOLOGY SOLUTIONS	6956F AVIATION BLVD		GLEN BURNIE	MD	21061-2531
SKYTOP TOWERS INC	13503 W US HIGHWAY 34		MALCOLM	NE	68402-9783
SLAYDEN GLASS INC	239 N OLD SAINT LOUIS RD		WOOD RIVER	IL	62095-1437
SMARTLINK LLC	1997 ANNAPOLIS EX PKW 200		ANNAPOLIS	MD	21401

Run Date : 7/2/2018 6:32:41 AM

E10130

Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
SMITH TANK & STEEL INC	PO BOX 2370		GONZALES	LA	70707-2370
SMITHSON INC	PO BOX 1731		ROCKY MOUNT	NC	27802-1731
SNELL NORTHCUTT ELECTRIC INC	P O BOX 24601		LITTLE ROCK	AR	72221
SNELSON COMPANIES INC	601 W STATE ST		SEDRO WOOLLEY	WA	98284-1560
SNYDER CONSTRUCTION INC	2766 11 MILE RD STE 1		BERKLEY	MI	48072-3033
SOLARIS ROOFING SOLUTIONS INC	31W023 NORTH AVE		WEST CHICAGO	IL	60185-1060
SOLID PLATFORMS INC	6610 MELTON RD		PORTAGE	IN	46368-1236
SORELLA GROUP	14844 W 107TH ST		LENEXA	KS	66215-4002
SOUTHEAST DIRECTIONAL DRILLING LLC	3117 N CESSNA AVE		CASA GRANDE	AZ	85122-7947
SOUTHEAST POWER CORPORATION	1684 W HIBISCUS BLVD		MELBOURNE	FL	32901-2631
SOUTHERN ENVIRONMENTAL INC	6540 W NINE MILE RD		PENSACOLA	FL	32526-4288
SOUTHERN ERECTORS INC	6540 W NINE MILE RD		PENSACOLA	FL	32526-4288
SOUTHERN MARINE CONSTRUCTION CO	PO BOX 4539		CHATTANOOGA	TN	37405-0539
SOUTHWEST FIXTURE INSTALLERS INC	15600 28TH AVE N		PLYMOUTH	MN	55447-1903
SOVEREIGN STAFFING GROUP INC	15024 W 117TH ST		OLATHE	KS	66062-9308
SPARROW PLUMBING & HEATING INC	313 DELAWARE ST		QUINCY	IL	62301-4823
SPECPRO INCORPORATED OF NEBRASKA	309 E 2ND ST STE 4		PAPILLION	NE	68046-2469

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

EI0130

Taxation Division

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
SPECTRA TECH LLC	10340 PLEASANT ST STE 100		NOBLESVILLE	IN	46060-3947
SPORTS METALS INC	PO BOX 1338		PHENIX CITY	AL	36868-1338
SSI INCORPORATED OF NW ARKANSAS	2817 YUMA ST		FORT SMITH	AR	72901-8778
STAKE CENTER LOCATING INC	2920 W DIRECTORS ROW		SALT LAKE CTY	UT	84104-4549
STANDARD CARTAGE CO INC	2400 S 27TH AVE		BROADVIEW	IL	60155-3853
STARR HOMES LLC	7555 W 160TH ST		STILWELL	KS	66085-8101
STEPHENS & SMITH CONSTRUCTION CO INC	1542 S 1ST ST		LINCOLN	NE	68502-1999
STERLING PIPELINE SOLUTIONS LLC	501 E 151ST ST		PHOENIX	IL	60426-2402
STEVE HOEGGER & ASSOCIATES INC	2630 N HIGHWAY 78		WYLIE	TX	75098-6055
STILL CONTRACTORS LLC	15740 S MAHAFFIE ST		OLATHE	KS	66062-4038
STILTNER ELECTRIC INC	340 HERKY ST		NORTH LIBERTY	IA	52317-8523
STIREK CONSTRUCTION SERVICES INC	PO BOX 10		BLAIR	NE	68008-0010
STONEBRIDGE CONSTRUCTION LLC	PO BOX 16787		JONESBORO	AR	72403-6712
STORY CONSTRUCTION CO	2810 WAKEFIELD CIR		AMES	IA	50010-7725
STRINGER CONSTRUCTION COMPANY INC	6141 LUCILLE LN		SHAWNEE	KS	66203-2609
STRUCTURAL GROUP INC	10150 OLD COLUMBIA RD		COLUMBIA	MD	21046-1274
SUMMIT HEARTLAND LLC	3823 W 1800 S		REMINGTON	IN	47977-8831
SUMMIT REFRIGERATION GROUP INC	W141N9501 FOUNTAIN BLVD		MENOMONEE FALLS	WI	53051-1623

Run Date : 7/2/2018 6:32:41 AM

E10130

Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
SUNBELT FIRE PROTECTION INC	1520 S MEMORIAL DR		TULSA	OK	74112-7039
SUNLAND CONSTRUCTION INC	PO BOX 1087		EUNICE	LA	70535-1087
SUPER SKY PRODUCTS ENTERPRISES LLC	10301 N ENTERPRISE DR		MEQUON	WI	53092-4639
SUPREME ELECTRIC CO	PO BOX 114		QUINCY	IL	62306-0114
SURE STEEL INC	7528 CORNIA DR		SOUTH WEBER	UT	84405-9605
SURFACE AMERICA INC	PO BOX 157		WILLIAMSVILLE	NY	14231-0157
SURFACE PREPARATION TECHNOLOGIES LLC	81 TEXACO RD		MECHANICSBURG	PA	17050-2623
SUTTERFIELD ELECTRIC CONTRACTING CORP	114 1ST AVE		EDWARDSVILLE	IL	62025-2574
SWIFT ROOFING INC	PO BOX 1102		MURRAY	KY	42071-0020
T & G CONSTRUCTION OF STILLWATER INC	5620 MEMORIAL AVE N STE H		STILLWATER	MN	55082-1052
T WINN CONSTRUCTION COMPANY	15018 A CIR		OMAHA	NE	68144-5558
TANCO ENGINEERING INCORPORATED	1400 TAURUS CT		LOVELAND	CO	80537-3297
TANK BUILDERS INC	PO BOX 1527		EULESS	TX	76039-1527
TANK FOUNDATIONS INC	410 W FRONT ST		LAKE MILLS	IA	50450-1109
TATE GENERAL CONTRACTORS INC	115 WOODY LN		JONESBORO	AR	72401-0496
TATE ORNAMENTAL INC	496 SAGE RD N		WHITE HOUSE	TN	37188-8174
TAYLOR BROS CONSTRUCTION CO INC	4555 MIDDLE RD		COLUMBUS	IN	47203-1834

Run Date : 7/2/2018 6:32:41 AM

EI0130

Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
TCI SERVICES INCORPORATED	4333 W 21ST ST		TULSA	OK	74107-3444
TCR SYSTEMS	PO BOX 3988		DECATUR	IL	62524
TDR CONTRACTORS INC	PO BOX 1003		GILMER	TX	75644-1003
TEKRAN INSTRUMENTS CORPORATION	230 TECH CENTER DR		KNOXVILLE	TN	37912-2747
TELECOM SOLUTIONS MIDWEST LLC	85 CARDINAL TRL		POCAHONTAS	AR	72455-5424
TELLUS LLC	829 NANCY LYNN LN		ARNOLD	MD	21012-3025
TENNESSEE ELECTRIC COMPANY INC	1025 KONNAROCK RD		KINGSPORT	TN	37664-3720
TERRAZZO USA AND ASSOCIATES INC	9532 TOWRY CT		OKLAHOMA CITY	OK	73165-4629
TEXAS ALLIANCE GROUP INC	11288 WEST RD		HOUSTON	TX	77065-4493
TEXOMA INDUSTRIAL INSULATION ASSOCIATION	PO BOX 497		DENISON	TX	75021-0497
THE DRILLER LLC	5125 E UNIVERSITY AVE		PLEASANT HILL	IA	50327-7007
THE FISHEL COMPANY	1366 DUBLIN RD		COLUMBUS	OH	43215-1093
THE FORREST GROUP LTD	2108 N 129TH EAST AVE		TULSA	OK	74116-1729
THE FRED CHRISTEN & SONS COMPANY	PO BOX 547		TOLEDO	OH	43697-0547
THE KILIAN CORPORATION	PO BOX A		MASCOUTAH	IL	62258-0187
THE MAXIS GROUP INC	8225 E DEL CAMINO DR # 100		SCOTTSDALE	AZ	85258-2330
THE MORGANTI GROUP INC	100 MILL PLAIN RD STE 400		DANBURY	CT	06811-5189
THE REDMOND COMPANY	W228N745 WESTMOUND DR		WAUKESHA	WI	53186-1654

Run Date : 7/2/2018 6:32:41 AM

EI0130

Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
THE ROBINS & MORTON GROUP	PO BOX 59289		BIRMINGHAM	AL	35259-9289
THE WEITZ CONSTRUCTION COMPANY INC	420 WATSON POWELL PKWY STE 100		DES MOINES	IA	50309-1611
THIELSCH ENGINEERING INC	195 FRANCES AVE		CRANSTON	RI	02910-2211
THIRKETTLE CORPORATION	6700 GUADA COMA DR		SCHERTZ	TX	78154-3247
THOMAS GRACE CONSTRUCTION INC	5605 MEMORIAL AVE N		STILLWATER	MN	55082-1092
THOMPSON ELECTRIC COMPANY	3505 S 61ST AVENUE CIR		OMAHA	NE	68106-4306
THOMPSON THRIFT CONSTRUCTION INC	901 WABASH AVE STE 300		TERRE HAUTE	IN	47807-3233
TINDALL CONTRACTOR INC	5240 NAMEOKI RD		PONTOON BEACH	IL	62040-2656
TITAN CONTRACTING & LEASING CO INC	2205 RAGU DR		OWENSBORO	KY	42303-1437
TLDB INC	15225 INDUSTRIAL RD		OMAHA	NE	68144-3249
TOMS TUCKPOINTING LLC	202 W BROADWAY ST		POCAHONTAS	AR	72455-3419
TOTAL ELECTRIC CONTRACTORS INC	PO BOX 13247		EDWARDSVILLE	KS	66113-0247
TOUCH UP PLUS	5353 SPRINGFIELD DR		EDWARDSVILLE	IL	62025-5835
TOURNEAR ROOFING CO	2605 SPRING LAKE RD		QUINCY	IL	62305-0523
TOWER TECHNOLOGIES GROUP LLC	PO BOX 266		EDGERTON	WI	53534-0266
TOWN AND COUNTRY PLUMBING INC	1201 N 2ND ST		ROGERS	AR	72756-2839
TRADEMARK RESTORATION INCORPORATED	6260 E RIVERSIDE BLVD # 163		LOVES PARK	IL	61111-4418

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

EI0130

Taxation Division

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
TRI CITY ELECTRIC COMPANY OF IOWA	6225 N BRADY ST		DAVENPORT	IA	52806-0002
TRI COUNTY WELDING & FABRICATION	PO BOX 137		ARTHUR	IL	61911-0137
TRITECHNE CONSTRUCTION & INSTALLATION INC	2655 DONAGHEY AVE STE 3		CONWAY	AR	72032-2317
TROCIN INC	1901 MARTIN RD		DRIPPING SPGS	TX	78620-3507
TRUCK CRANE SERVICE COMPANY	PO BOX 21388		SAINT PAUL	MN	55121-0388
TUCKER CONSTRUCTION CO	PO BOX 442		LINDSAY	OK	73052
TUCKER TECHNOLOGY INC	300 FRANK H OGAWA PLZ STE 210		OAKLAND	CA	94612-2060
TUFF WRAP INSTALLATIONS INC	2080 DETWILER RD STE 2		HARLEYSVILLE	PA	19438-2911
TUNISTA CONSTRUCTION LLC	PO BOX 70668		FAIRBANKS	AK	99707-0668
TURNER CERAMIC TILE INC	11535 KAW DR		KANSAS CITY	KS	66111-1111
TUTTLE INC	110 PAGE ST		FRIEND	NE	68359-1147
TWEET GAROT MECHANICAL INC	325 REID ST		DE PERE	WI	54115-2130
TYROLT INCORPORATED	724 N MERCER ST		DECATUR	IL	62522-1699
U S ELECTRICAL CONSTRUCTION CO INC	160 HARRISONVILLE LAKE RD		PIESGROVE	NJ	08098-3237
U.S. GENERAL CONSTRUCTION, INC.	PO BOX 304		ALPHARETTA	GA	30009-0304
UCI INC	PO BOX 9592		WICHITA	KS	67277-0592
UDIG LLC	8000 FRANKLIN FARMS DR STE 100		HENRICO	VA	23229-5002

Run Date : 7/2/2018 6:32:41 AM

E10130

Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
ULTIMATE THERMAL INC	PO BOX 34818		OMAHA	NE	68134-0818
ULTRAFLOTE LLC	3640 W 12TH ST		HOUSTON	TX	77008-6050
UNITED CONSTRUCTION COMPANY	PO BOX 4408		DAVENPORT	IA	52808-4408
UNITED GOLF LLC	2108 N 129TH EAST AVE		TULSA	OK	74116-1729
UNITED PIPING INC	4510 AIRPORT RD		DULUTH	MN	55811-1523
UNITED STATES CONSTRUCTION LLC	5845 HORTON ST STE 203		MISSION	KS	66202-2610
UNIVERSAL COMMUNICATIONS LLC	19915 W 161ST ST STE E		OLATHE	KS	66062-2762
UNIVERSAL SERVICES TELECOMMUNICATIONS TECHS INC	12151 120TH ST S		HASTINGS	MN	55033-9428
UNIVERSAL WALL SYSTEMS INC	4400 DONKERS CT SE		GRAND RAPIDS	MI	49512-4054
UPCHURCH PLUMBING INC	PO BOX 8106		GREENWOOD	MS	38935-8106
URETEK USA INC	PO BOX 1929		TOMBALL	TX	77377-1929
USC LLC	2320 124TH RD		SABETHA	KS	66534-9459
UTILITY METERING SOLUTIONS	8812 FREY RD		HOUSTON	TX	77034-3502
UTILITY SOLUTIONS LLC	14612 PARALLEL LN		BASEHOR	KS	66007-4001
UTILTIY SYSTEMS SOLUTIONS INC	14330 MIDWAY RD STE 200		DALLAS	TX	75244-3501
VCC LLC	PO BOX 2558		LITTLE ROCK	AR	72203-2558
VEIT AND COMPANY INC	14000 VEIT PL		ROGERS	MN	55374-9306
VENTURE CONSTRUCTION WATERPROOFING INC	42 LOCKE RD		CONCORD	NH	03301-5416

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

EI0130

Taxation Division

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
VETERANS RANGE SOLUTIONS LLC	27840 COUNTY ROUTE 193 STE 2		THERESA	NY	13691-4016
VIACON INC	70 BANKS RD		STOCKBRIDGE	GA	30281-4362
VICTORY AIR INC	3988 ULSTER ST		DENVER	CO	80207-1729
VIKING ERECTORS CORP	PO BOX 1336		MC MURRAY	PA	15317-4336
VISIONSOFT INTERNATIONAL INC	1842 OLD NORCROSS RD STE 100		LAWRENCEVILLE	GA	30044-8802
VISU SEWER INC	W230N48557 BETKER RD		PEWAUKEE	WI	53072
VKW CONSTRUCTION LLC	505 S MADISON DR		TEMPE	AZ	85281-7213
WADES REFRIGERATION INC	PO BOX 2164		BATESVILLE	AR	72503-2164
WAFFLE HOUSE INC	PO BOX 6450		NORCROSS	GA	30091-6450
WALTERS CARPENTRY INC	2340 SHEPLER CHURCH AVE SW		CANTON	OH	44706-5615
WATSON ELECTRIC INC	318 N 8TH ST		SALINA	KS	67401-2312
WATTS ELECTRIC COMPANY	13351 DOVERS ST		WAVERLY	NE	68462-2516
WEATHERCRAFT COMPANY OF GRAND ISLAND	323 N CLEBURN ST		GRAND ISLAND	NE	68801-4705
WEATHERCRAFT COMPANY OF LINCOLN	PO BOX 80459		LINCOLN	NE	68501-0459
WEEKES CONSTRUCTION INC	PO BOX 17977		GREENVILLE	SC	29606-8977
WEITZ HEAVY INDUSTRIAL LLC	420 WATSON POWELL PKWY STE 100		DES MOINES	IA	50309-1611
WESTERN OILFIELDS SUPPLY COMPANY	PO BOX 2248		BAKERSFIELD	CA	93303-2248
WHEATLAND CONTRACTING LLC	6204 246TH RD		EFFINGHAM	KS	66023-5151

Run Date : 7/2/2018 6:32:41 AM

Missouri Department of Revenue

EI0130

Taxation Division

Show Secretary of State Cover: Yes

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
WIGINTON CORPORATION	699 AERO LN		SANFORD	FL	32771-6699
WILLIAM G CURTH INC	PO BOX 3463		SHAWNEE	KS	66203-0463
WILLIAMS ELECTRIC CO INC	695 DENTON BLVD NW		FT WALTON BCH	FL	32547-2150
WILSONS POOLS PLUS INC	843 SCOTT TROY RD		LEBANON	IL	62254-1911
WINGER CONTRACTING COMPANY	PO BOX 637		OTTUMWA	IA	52501-0637
WOLF CONSTRUCTION INC	5630 SW RANDOLPH AVE		TOPEKA	KS	66609-1158
WOLFSWINKEL INC	2202 WOLF WAY		WDM	IA	50265-7663
WOLTCOM INC	2300 TECHNOLOGY PKWY STE 8		HOLLISTER	CA	95023-2536
WOODS BASEMENT SYSTEMS INC	524 VANDALIA ST		COLLINSVILLE	IL	62234-4041
WORLDWIDE TURBINES LLC	1001 YAMATO RD STE 312		BOCA RATON	FL	33431-4403
WR NEWMAN & ASSOCIATES INC	2854 LOGAN ST		NASHVILLE	TN	37211-2409
WS INDUSTRIAL SERVICES INC	35 MAIN PL STE 175		COUNCIL BLFS	IA	51503-0708
W-S SPECIALTY SERVICES LLC	35 MAIN PL STE 175		COUNCIL BLFS	IA	51503-0708
WSI INC	PO BOX 263		VALMEYER	IL	62295-0263
WVP INSTALLATIONS INC	7317 MAPLE AVE		CINNINNATI	OH	45231-4233
WYOMING EFFICIENCY CONTRACTORS INC	530 E COSTILLA ST		COLORADO SPGS	CO	80903-3763
XL INDUSTRIAL SERVICES INC	1920 N 400 W		LA PORTE	IN	46350-2131
YOKOGAWA CORPORATION OF AMERICA	2 DART RD		NEWMAN	GA	30265-1094

Run Date : 7/2/2018 6:32:41 AM

EI0130

Show Secretary of State Cover: Yes

Missouri Department of Revenue

Taxation Division

Construction Transient Employer Listing

Contractor Name	Street Address	Street Address 2	City	State	Zip Code
YOTHER CONSTRUCTION MANAGEMENT INCORPORATED	PO BOX 2208		CAREFREE	AZ	85377-2208
ZAPATA INCORPORATED	6302 FAIRVIEW RD STE 600		CHARLOTTE	NC	28210-2244
ZEAMERS WELDING LLC	2772 BLAKE RD E		DE PERE	WI	54115-8720
ZERNCO INC	2400 S GREENWICH RD		WICHITA	KS	67210-1813
ZIMMERMAN CONSTRUCTION COMPANY INC	12509 HEMLOCK ST		OVERLAND PARK	KS	66213-1453

The Secretary of State is required by sections 347.141 and 359.481, RSMo 2016, to publish dissolutions of limited liability companies and limited partnerships. The content requirements for the one-time publishing of these notices are prescribed by statute. This listing is published pursuant to these statutes. We request that documents submitted for publication in this section be submitted in camera ready 8 1/2" x 11" manuscript by email to adrules.dissolutions@sos.mo.gov.

**NOTICE OF WINDING UP
TO ALL CREDITORS OF AND
CLAIMANTS AGAINST
J & H Dirt Works, LLC**

On June 22, 2018, **J & H Dirt Works, LLC**, a Missouri limited liability company, filed its Notice of Winding Up with the Missouri Secretary of State. J & H Dirt Works, LLC requests that all persons and organizations who have claims against it present them immediately by letter to J & H Dirt Works, LLC, c/o Law Office of Camron Hoorfar, P.C., 202 SW Market Street, Lee's Summit, MO 64063.

All claims must include the following information: (a) name and address of the claimant, (b) the amount claimed, (c) date on which the claim arose, (d) basis for the claim and documentation thereof, and (e) whether or not the claim was secured and, if so, the collateral used as security.

All claims against J & H Dirt Works, LLC will be barred unless a proceeding to enforce the claim is commenced within three (3) years after the date of publication of this notice.

**NOTICE OF DISSOLUTION
TO ALL CREDITORS OF AND CLAIMANTS AGAINST
EYE CONSULTANTS, INCORPORATED**

NOTICE IS HEREBY GIVEN that Eye Consultants, Incorporated, a Missouri corporation (hereinafter the "Corporation") filed its Articles of Dissolution with the Missouri Secretary of State on June 11, 2018.

You are hereby notified that if you believe you have a claim against the Corporation, you must submit in writing to: Todd Lumsden, D.O. at 64 Doctors' Park, Cape Girardeau, Missouri 63703 the details of your claim, which shall include the following information: the name, address and phone number of the claimant; the amount claimed; the date on which the claim arose; the basis for the claim; and any documentation for the claim.

All claims against the Corporation will be barred unless a proceeding to enforce the claim is commenced within two (2) years after the publication of this Notice.

**NOTICE OF DISSOLUTION TO ALL CREDITORS OF AND
CLAIMANTS AGAINST PARK NORTH CONSULTING, L.L.C.**

On Friday, June 29, 2018, PARK NORTH CONSULTING, L.L.C., f/k/a Flyover Consulting, L.L.C. filed its Notice of Winding Up with the Missouri Secretary of State. The event was effective on June 29, 2018.

You are hereby notified that if you believe you have a claim against the Limited Liability Company, you must submit a summary in writing of the circumstances surrounding your claim to the Limited Liability Company at **2300 Higgins Road, P O Box 1517, Platte City, MO 64079**.

The summary of your claim must include the following information:

1. The name, address and telephone number of the claimant.
2. The amount of the claim.
3. The date on which the event on which the claim is based occurred.
4. A brief description of the nature of the debt or the basis for the claim.
5. Copies of any document supporting your claim.

The deadline for claim submission is set forth in Chapter 347 of the Revised Statutes of Missouri. All claims against the LLC will be barred unless the proceeding to enforce the claim is commenced within three years after the publication of this notice.

Effective Date: June 29, 2018

PARK NORTH
CONSULTING, L.L.C.
f/k/a Flyover Consulting,
L.L.C.

**NOTICE OF WINDING UP AND DISSOLUTION
TO ALL CREDITORS AND CLAIMANTS AGAINST
AGILE NETWORK LLC**

AGILE NETWORK LLC, a Missouri limited liability company, plans to dissolve and has filed a Notice of Winding Up on June 5, 2018. Any and all claims against AGILE NETWORK LLC should be forwarded to James Donahue, 732 Crown Industrial Court, Suite A, Chesterfield, Missouri 63005. Each claim should include the following: (i) the name, address and telephone number of the claimant; (ii) the amount of the claim; (iii) the basis for the claim; and (iv) documentation of the claim. Any claims against AGILE NETWORK LLC will be barred unless a proceeding to enforce the claim is commenced within three years after the publication of this notice.

**Notice of Dissolution of
Limited Liability Company
To All Creditors of and
Claimants Against
215 O'Fallon Place, L.L.C.**

On June 21, 2018, 215 O'Fallon Place, L.L.C. ("the Company"), a Missouri limited liability company, filed its Notice of Winding Up for a Limited Liability Company with the Missouri Secretary of State, effective on June 21, 2018.

Any claims against the Company may be sent to: Blitz, Bardgett & Deutsch, L.L.C., Attn: Scott Smithson, 120 South Central Avenue, Ste. 1500, St. Louis, MO 63105. Each claim must include the following information: the name, address and phone number of the claimant; the amount claimed; the date on which the claim arose; the basis for the claim; and documentation for the claim.

All claims against the Company will be barred unless a proceeding to enforce the claim is commenced within three (3) years after the publication of this Notice.

**NOTICE OF WINDING UP
TO ALL CREDITORS OF AND CLAIMANTS AGAINST
ECI ASSETS, LLC**

NOTICE IS HEREBY GIVEN that ECI Assets, LLC, a Missouri limited liability company (hereinafter the "Company") filed its Notice of Winding Up with the Missouri Secretary of State on June 11, 2018.

You are hereby notified that if you believe you have a claim against the Company, you must submit in writing to: Todd J. Lumsden, D.O., 64 Doctors' Park, Cape Girardeau, Missouri 63703 the details of your claim, which shall include the following information: the name, address and phone number of the claimant; the amount claimed; the date on which the claim arose; the basis for the claim; and any documentation for the claim.

All claims against the Company will be barred unless a proceeding to enforce the claim is commenced within three (3) years after the publication of this Notice.

**NOTICE OF WINDING UP OF LIMITED PARTNERSHIP
TO ALL CREDITORS OF AND CLAIMANTS AGAINST
LUZECKY PROPERTIES, L.P.
PURSUANT TO R.S.Mo. § 359-481**

Luzecky Properties, L.P., a Missouri limited partnership, filed its certificate of cancellation with the Missouri Secretary of State on June 5, 2018, effective on the filing date.

All persons and organizations with claims against said partnership must submit in writing to Luzecky Properties, L.P., c/o Frank C. Carnahan, Esq., Carnahan, Evans, Cantwell & Brown, P.C., 2205 S. Ingram Mill Road, Springfield, Missouri 65804-4043, including: 1) claimant's name, address and telephone number; 2) amount of claim; 3) date(s) claim accrued (or will accrue); 4) brief description of the nature of the debt or the basis for the claim; and 5) if the claim is secured, and if so, the collateral used as security.

Because of the dissolution, any claims against Luzecky Properties, L.P. will be barred unless a proceeding to enforce the claim is commenced within three (3) years after this notice.

**NOTICE OF WINDING UP
TO ALL CREDITORS OF AND CLAIMANTS AGAINST
LE BOUNCE HOLDINGS, LLC**

NOTICE IS HEREBY GIVEN that **Le Bounce Holdings, LLC**, a Missouri limited liability company (hereinafter the "Company") filed its Notice of Winding Up with the Missouri Secretary of State on June 22, 2018.

You are hereby notified that if you believe you have a claim against the Company, you must submit in writing to: Patty Schaefer, 1610 N. Kingshighway, Suite 301, Cape Girardeau, Missouri 63701 the details of your claim, which shall include the following information: the name, address and phone number of the claimant; the amount claimed; the date on which the claim arose; the basis for the claim; and any documentation for the claim.

All claims against the Company will be barred unless a proceeding to enforce the claim is commenced within three (3) years after the publication of this Notice.

**NOTICE OF DISSOLUTION
TO ALL CREDITORS OF AND CLAIMANTS AGAINST
BARISTAS COFFEE BAR, INC.**

NOTICE IS HEREBY GIVEN that **Baristas Coffee Bar, Inc.**, a Missouri corporation (hereinafter the "Corporation") filed its Articles of Dissolution with the Missouri Secretary of State on June 22, 2018.

You are hereby notified that if you believe you have a claim against the Corporation, you must submit in writing to: Patty Schaefer, 1610 N. Kingshighway, Suite 301, Cape Girardeau, Missouri 63701 the details of your claim, which shall include the following information: the name, address and phone number of the claimant; the amount claimed; the date on which the claim arose; the basis for the claim; and any documentation for the claim.

All claims against the Corporation will be barred unless a proceeding to enforce the claim is commenced within two (2) years after the publication of this Notice.

NOTICE OF WINDING UP
TO ALL CREDITORS OF AND
CLAIMANTS AGAINST
DREW PROPERTY MANAGEMENT, LLC

On June 25, 2018, DREW PROPERTY MANAGEMENT, LLC, a Missouri limited liability company, filed its Notice of Winding Up with the Missouri Secretary of State. Dissolution was effective on June 25, 2018.

Said company requests that all persons and organizations who have claims against it present them immediately by letter to the corporation at:

DREW PROPERTY MANAGEMENT, LLC
Attn: Robert Taylor
506 NW Golfview Drive
Blue Springs, MO 64014

Or

Maggie A. Toman, Esq.
Sandberg Phoenix & von Gontard P.C.
600 Washington Avenue, 15th Floor
St. Louis, MO 63101

All claims must include the name and address of the claimant; the amount claimed; the basis for the claim; and the date(s) on which the event(s) on which the claim is based occurred.

(NOTICE: Because of the dissolution of DREW PROPERTY MANAGEMENT, LLC, any claims against it will be barred unless a proceeding to enforce the claim is commenced within two years after the publication date of the two notices authorized by statute, whichever is published last.)

Rule Changes Since Update to Code of State Regulations

This cumulative table gives you the latest status of rules. It contains citations of rulemakings adopted or proposed after deadline for the monthly Update Service to the *Code of State Regulations*, citations are to volume and page number in the *Missouri Register*, except for material in this issue. The first number in the table cite refers to the volume number or the publication year—42 (2017) and 43 (2018). MoReg refers to *Missouri Register* and the numbers refer to a specific *Register* page, R indicates a rescission, W indicates a withdrawal, S indicates a statement of actual cost, T indicates an order terminating a rule, N.A. indicates not applicable, RAN indicates a rule action notice, RUC indicates a rule under consideration, and F indicates future effective date.

Rule Number	Agency	Emergency	Proposed	Order	In Addition
OFFICE OF ADMINISTRATION					
1 CSR 10	State Officials' Salary Compensation Schedule				42 MoReg 1849
1 CSR 50-5.010	Missouri Ethics Commission	43 MoReg 1121	43 MoReg 522	43 MoReg 1475	
1 CSR 50-5.020	Missouri Ethics Commission	43 MoReg 1121	43 MoReg 522	43 MoReg 1475	
DEPARTMENT OF AGRICULTURE					
2 CSR 10-1.010	Ag Business Development		43 MoReg 1258		
2 CSR 10-2.010	Market Development		43 MoReg 666R	This IssueR	
2 CSR 10-3.010	Market Development		43 MoReg 666R	This IssueR	
2 CSR 10-4.010	Market Development		43 MoReg 666R	This IssueR	
2 CSR 10-5.010	Market Development		43 MoReg 667R	This IssueR	
2 CSR 10-5.015	Market Development		43 MoReg 667R	This IssueR	
2 CSR 20-1.010	Administrative Services		43 MoReg 1417R		
2 CSR 20-3.010	Administrative Services (Changed to 2 CSR 110-4.010)		43 MoReg 1417		
2 CSR 20-3.020	Administrative Services (Changed to 2 CSR 110-4.020)		43 MoReg 1418		
2 CSR 20-3.030	Administrative Services (Changed to 2 CSR 110-4.030)		43 MoReg 1418		
2 CSR 20-3.040	Administrative Services (Changed to 2 CSR 110-4.040)		43 MoReg 1418		
2 CSR 20-3.050	Administrative Services		43 MoReg 1419R		
2 CSR 30-10.010	Animal Health	43 MoReg 385	43 MoReg 386	43 MoReg 1919	
2 CSR 50-1.010	Fairs		43 MoReg 1258R		
2 CSR 50-2.010	Fairs		43 MoReg 1259R		
2 CSR 50-3.020	Fairs		43 MoReg 1259R		
2 CSR 50-4.010	Fairs		43 MoReg 1259R		
2 CSR 50-5.010	Fairs		43 MoReg 1259R		
2 CSR 50-6.010	Fairs		43 MoReg 1260R		
2 CSR 50-6.020	Fairs		43 MoReg 1260R		
2 CSR 50-6.030	Fairs		43 MoReg 1260R		
2 CSR 50-6.040	Fairs		43 MoReg 1260R		
2 CSR 50-7.010	Fairs		43 MoReg 1261R		
2 CSR 60-1.010	Grain Inspection and Warehousing		43 MoReg 1419		
2 CSR 60-2.010	Grain Inspection and Warehousing		43 MoReg 1420R		
2 CSR 60-4.016	Grain Inspection and Warehousing		43 MoReg 1420R		
2 CSR 60-4.045	Grain Inspection and Warehousing		43 MoReg 1420R		
2 CSR 60-4.060	Grain Inspection and Warehousing		43 MoReg 1420R		
2 CSR 60-4.070	Grain Inspection and Warehousing		43 MoReg 1421R		
2 CSR 60-4.080	Grain Inspection and Warehousing		43 MoReg 1421		
2 CSR 60-4.090	Grain Inspection and Warehousing		43 MoReg 1421R		
2 CSR 60-4.120	Grain Inspection and Warehousing		43 MoReg 1422		
2 CSR 60-4.130	Grain Inspection and Warehousing		43 MoReg 1422		
2 CSR 60-4.170	Grain Inspection and Warehousing		43 MoReg 1422		
2 CSR 60-5.040	Grain Inspection and Warehousing		43 MoReg 1422R		
2 CSR 70-1.010	Plant Industries		43 MoReg 1549		
2 CSR 70-10.080	Plant Industries		43 MoReg 1550		
2 CSR 70-11.020	Plant Industries		43 MoReg 1554R		
2 CSR 70-11.030	Plant Industries		43 MoReg 1554R		
2 CSR 70-11.050	Plant Industries		43 MoReg 1555R		
2 CSR 70-12.010	Plant Industries		43 MoReg 1555R		
2 CSR 70-15.035	Plant Industries		43 MoReg 1555R		
2 CSR 70-15.045	Plant Industries		43 MoReg 1555		
2 CSR 70-16.010	Plant Industries		43 MoReg 1556R		
2 CSR 70-16.015	Plant Industries		43 MoReg 1556R		
2 CSR 70-16.020	Plant Industries		43 MoReg 1556R		
2 CSR 70-16.025	Plant Industries		43 MoReg 1556R		
2 CSR 70-16.030	Plant Industries		43 MoReg 1557R		
2 CSR 70-16.035	Plant Industries		43 MoReg 1557R		
2 CSR 70-16.040	Plant Industries		43 MoReg 1557R		
2 CSR 70-16.045	Plant Industries		43 MoReg 1558R		
2 CSR 70-16.050	Plant Industries		43 MoReg 1558R		
2 CSR 70-16.055	Plant Industries		43 MoReg 1558R		
2 CSR 70-16.060	Plant Industries		43 MoReg 1558R		
2 CSR 70-16.065	Plant Industries		43 MoReg 1559R		
2 CSR 70-16.070	Plant Industries		43 MoReg 1559R		
2 CSR 70-16.075	Plant Industries		43 MoReg 1559R		
2 CSR 70-25.070	Plant Industries		43 MoReg 1559R		
2 CSR 70-35.010	Plant Industries		43 MoReg 1560		
2 CSR 70-35.031	Plant Industries		43 MoReg 1560R		
2 CSR 70-40.005	Plant Industries		43 MoReg 1560R		

Rule Number	Agency	Emergency	Proposed	Order	In Addition
2 CSR 70-40.015	Plant Industries		43 MoReg 1561R		
2 CSR 70-40.016	Plant Industries		43 MoReg 1561R		
2 CSR 70-40.017	Plant Industries		43 MoReg 1561R		
2 CSR 70-40.025	Plant Industries		43 MoReg 1561R		
2 CSR 70-40.040	Plant Industries		43 MoReg 1562R		
2 CSR 70-40.050	Plant Industries		43 MoReg 1562R		
2 CSR 70-40.055	Plant Industries		43 MoReg 1562R		
2 CSR 80-2.001	State Milk Board (Changed from 2 CSR 80-2.180)		43 MoReg 1136		
2 CSR 80-2.002	State Milk Board (Changed from 2 CSR 80-2.181)		43 MoReg 1137		
2 CSR 80-2.003	State Milk Board		43 MoReg 1126		
2 CSR 80-2.010	State Milk Board		43 MoReg 1126R		
2 CSR 80-2.020	State Milk Board		43 MoReg 1127		
2 CSR 80-2.030	State Milk Board		43 MoReg 1127		
2 CSR 80-2.040	State Milk Board		43 MoReg 1128R		
2 CSR 80-2.050	State Milk Board		43 MoReg 1128R		
2 CSR 80-2.060	State Milk Board		43 MoReg 1128R		
2 CSR 80-2.070	State Milk Board		43 MoReg 1128		
2 CSR 80-2.080	State Milk Board		43 MoReg 1133R		
2 CSR 80-2.091	State Milk Board		43 MoReg 1134R		
2 CSR 80-2.101	State Milk Board		43 MoReg 1134R		
2 CSR 80-2.110	State Milk Board		43 MoReg 1134R		
2 CSR 80-2.121	State Milk Board		43 MoReg 1135R		
2 CSR 80-2.130	State Milk Board		43 MoReg 1135R		
2 CSR 80-2.141	State Milk Board		43 MoReg 1135R		
2 CSR 80-2.151	State Milk Board		43 MoReg 1135R		
2 CSR 80-2.161	State Milk Board		43 MoReg 1136R		
2 CSR 80-2.170	State Milk Board		43 MoReg 1136R		
2 CSR 80-2.180	State Milk Board (Changed to 2 CSR 80-2.001)		43 MoReg 1136		
2 CSR 80-2.181	State Milk Board (Changed to 2 CSR 80-2.002)		43 MoReg 1137		
2 CSR 80-2.190	State Milk Board		43 MoReg 1137		
2 CSR 80-3.010	State Milk Board		43 MoReg 1139		
2 CSR 80-3.060	State Milk Board		43 MoReg 1139		
2 CSR 80-3.120	State Milk Board		43 MoReg 1139		
2 CSR 80-3.130	State Milk Board		43 MoReg 1139R		
2 CSR 80-4.010	State Milk Board		43 MoReg 1140		
2 CSR 80-5.010	State Milk Board		43 MoReg 1140		
2 CSR 80-6.011	State Milk Board		43 MoReg 1141		
2 CSR 80-6.021	State Milk Board		43 MoReg 1141		
2 CSR 80-6.041	State Milk Board		43 MoReg 1142		
2 CSR 90-10	Weights, Measures and Consumer Protection				42 MoReg 1203 This Issue
2 CSR 90-10.016	Weights, Measures and Consumer Protection		This IssueR		
2 CSR 90-11.010	Weights, Measures and Consumer Protection		This Issue		
2 CSR 90-20.040	Weights, Measures and Consumer Protection		This Issue		
2 CSR 90-21.010	Weights, Measures and Consumer Protection		This Issue		
2 CSR 90-21.060	Weights, Measures and Consumer Protection				This Issue
2 CSR 90-22.140	Weights, Measures and Consumer Protection		This Issue		
2 CSR 90-23.010	Weights, Measures and Consumer Protection		This Issue		
2 CSR 90-24.010	Weights, Measures and Consumer Protection				This Issue
2 CSR 90-25.010	Weights, Measures and Consumer Protection		This Issue		
2 CSR 90-30.040	Weights, Measures and Consumer Protection		43 MoReg 667	43 MoReg 1919	
2 CSR 90-30.050	Weights, Measures and Consumer Protection		This Issue		
2 CSR 90-30.070	Weights, Measures and Consumer Protection		This Issue		
2 CSR 90-30.080	Weights, Measures and Consumer Protection		This Issue		
2 CSR 90-30.090	Weights, Measures and Consumer Protection		This Issue		
2 CSR 90-30.100	Weights, Measures and Consumer Protection		This Issue		
2 CSR 90-36.010	Weights, Measures and Consumer Protection		This Issue		
2 CSR 90-38.010	Weights, Measures and Consumer Protection		This IssueR		
2 CSR 90-38.020	Weights, Measures and Consumer Protection		This IssueR		
2 CSR 90-38.030	Weights, Measures and Consumer Protection		This IssueR		
2 CSR 90-38.040	Weights, Measures and Consumer Protection		This IssueR		
2 CSR 90-38.050	Weights, Measures and Consumer Protection		This IssueR		
2 CSR 100-2.010	Missouri Agricultural and Small Business Development Authority		43 MoReg 1563R		
2 CSR 100-2.020	Missouri Agricultural and Small Business Development Authority		43 MoReg 1563R		
2 CSR 100-2.030	Missouri Agricultural and Small Business Development Authority		43 MoReg 1563R		
2 CSR 100-2.040	Missouri Agricultural and Small Business Development Authority		43 MoReg 1563R		
2 CSR 100-2.050	Missouri Agricultural and Small Business Development Authority		43 MoReg 1564R		
2 CSR 100-3.010	Missouri Agricultural and Small Business Development Authority		43 MoReg 1564R		
2 CSR 100-3.020	Missouri Agricultural and Small Business Development Authority		43 MoReg 1564R		
2 CSR 100-3.030	Missouri Agricultural and Small Business Development Authority		43 MoReg 1564R		
2 CSR 100-3.040	Missouri Agricultural and Small Business Development Authority		43 MoReg 1565R		
2 CSR 100-3.050	Missouri Agricultural and Small Business Development Authority		43 MoReg 1565R		
2 CSR 100-4.010	Missouri Agricultural and Small Business Development Authority		43 MoReg 1565R		
2 CSR 100-4.020	Missouri Agricultural and Small Business Development Authority		43 MoReg 1565R		
2 CSR 100-4.030	Missouri Agricultural and Small Business Development Authority		43 MoReg 1566R		

Rule Number	Agency	Emergency	Proposed	Order	In Addition
2 CSR 100-4.040	Missouri Agricultural and Small Business Development Authority		43 MoReg 1566R		
2 CSR 100-4.050	Missouri Agricultural and Small Business Development Authority		43 MoReg 1566R		
2 CSR 100-10.010	Missouri Agricultural and Small Business Development Authority		43 MoReg 1566		
2 CSR 110-1.010	Office of the Director		43 MoReg 1423R		
2 CSR 110-2.010	Office of the Director		43 MoReg 1423R		
2 CSR 110-4.010	Office of the Director (<i>Changed from 2 CSR 20-3.010</i>)		43 MoReg 1417		
2 CSR 110-4.020	Office of the Director (<i>Changed from 2 CSR 20-3.020</i>)		43 MoReg 1418		
2 CSR 110-4.030	Office of the Director (<i>Changed from 2 CSR 20-3.030</i>)		43 MoReg 1418		
2 CSR 110-4.040	Office of the Director (<i>Changed from 2 CSR 20-3.040</i>)		43 MoReg 1418		
DEPARTMENT OF CONSERVATION					
3 CSR 10-2.020	Conservation Commission				This Issue
3 CSR 10-4.200	Conservation Commission		43 MoReg 523	43 MoReg 1342	
3 CSR 10-7.410	Conservation Commission		43 MoReg 523	43 MoReg 1342	
3 CSR 10-7.433	Conservation Commission		N.A.	43 MoReg 1475	
3 CSR 10-7.434	Conservation Commission		N.A.	43 MoReg 1476	
3 CSR 10-7.435	Conservation Commission		N.A.	43 MoReg 1476	
3 CSR 10-7.437	Conservation Commission		N.A.	43 MoReg 1477	
3 CSR 10-7.455	Conservation Commission				43 MoReg 93
3 CSR 10-9.105	Conservation Commission		43 MoReg 524	43 MoReg 1342	
3 CSR 10-9.442	Conservation Commission		43 MoReg 527	43 MoReg 1342	
3 CSR 10-10.705	Conservation Commission		43 MoReg 528	43 MoReg 1343	
3 CSR 10-12.109	Conservation Commission		43 MoReg 528	43 MoReg 1343	
DEPARTMENT OF ECONOMIC DEVELOPMENT					
4 CSR 240-3.105	Public Service Commission		43 MoReg 979R		
4 CSR 240-3.110	Public Service Commission		43 MoReg 1567R		
4 CSR 240-3.115	Public Service Commission		43 MoReg 1567R		
4 CSR 240-3.120	Public Service Commission		43 MoReg 1567R		
4 CSR 240-3.125	Public Service Commission		43 MoReg 1568R		
4 CSR 240-3.161	Public Service Commission		43 MoReg 1423R		
4 CSR 240-3.165	Public Service Commission		43 MoReg 1568R		
4 CSR 240-3.210	Public Service Commission		43 MoReg 1569R		
4 CSR 240-3.215	Public Service Commission		43 MoReg 1569R		
4 CSR 240-3.220	Public Service Commission		43 MoReg 1569R		
4 CSR 240-3.225	Public Service Commission		43 MoReg 1570R		
4 CSR 240-3.245	Public Service Commission		43 MoReg 1570R		
4 CSR 240-3.270	Public Service Commission		43 MoReg 1571R		
4 CSR 240-3.280	Public Service Commission		43 MoReg 1571R		
4 CSR 240-3.290	Public Service Commission		43 MoReg 1571R		
4 CSR 240-3.295	Public Service Commission		43 MoReg 1572R		
4 CSR 240-3.310	Public Service Commission		43 MoReg 1572R		
4 CSR 240-3.315	Public Service Commission		43 MoReg 1572R		
4 CSR 240-3.320	Public Service Commission		43 MoReg 1573R		
4 CSR 240-3.325	Public Service Commission		43 MoReg 1573R		
4 CSR 240-3.335	Public Service Commission		43 MoReg 1574R		
4 CSR 240-3.405	Public Service Commission		43 MoReg 1574R		
4 CSR 240-3.410	Public Service Commission		43 MoReg 1574R		
4 CSR 240-3.415	Public Service Commission		43 MoReg 1575R		
4 CSR 240-3.420	Public Service Commission		43 MoReg 1575R		
4 CSR 240-3.435	Public Service Commission		43 MoReg 1575R		
4 CSR 240-3.605	Public Service Commission		43 MoReg 1576R		
4 CSR 240-3.610	Public Service Commission		43 MoReg 1576R		
4 CSR 240-3.615	Public Service Commission		43 MoReg 1577R		
4 CSR 240-3.620	Public Service Commission		43 MoReg 1577R		
4 CSR 240-3.640	Public Service Commission		43 MoReg 1577R		
4 CSR 240-10.085	Public Service Commission		43 MoReg 1424		
4 CSR 240-10.095	Public Service Commission		43 MoReg 1425		
4 CSR 240-10.105	Public Service Commission		43 MoReg 1578		
4 CSR 240-10.115	Public Service Commission		43 MoReg 1578		
4 CSR 240-10.125	Public Service Commission		43 MoReg 1579		
4 CSR 240-10.135	Public Service Commission		43 MoReg 1579		
4 CSR 240-10.145	Public Service Commission		43 MoReg 1580		
4 CSR 240-20.045	Public Service Commission		43 MoReg 979		
4 CSR 240-20.090	Public Service Commission		43 MoReg 1426		
4 CSR 240-28.010	Public Service Commission		43 MoReg 981		
4 CSR 240-28.011	Public Service Commission		43 MoReg 982		
4 CSR 240-28.012	Public Service Commission		43 MoReg 983		
4 CSR 240-28.013	Public Service Commission		43 MoReg 984		
4 CSR 240-28.014	Public Service Commission		43 MoReg 984		
4 CSR 240-28.015	Public Service Commission		43 MoReg 985		
4 CSR 240-28.016	Public Service Commission		43 MoReg 985		
4 CSR 240-28.020	Public Service Commission		43 MoReg 986R		
4 CSR 240-28.030	Public Service Commission		43 MoReg 986R		
4 CSR 240-28.040	Public Service Commission		43 MoReg 987R		
4 CSR 240-28.050	Public Service Commission		43 MoReg 987R		
4 CSR 240-28.060	Public Service Commission		43 MoReg 987R		
4 CSR 240-28.070	Public Service Commission		43 MoReg 988R		
4 CSR 240-28.080	Public Service Commission		43 MoReg 988R		
4 CSR 240-28.090	Public Service Commission		43 MoReg 988R		
4 CSR 240-29.010	Public Service Commission		43 MoReg 989R		
4 CSR 240-29.020	Public Service Commission		43 MoReg 989R		
4 CSR 240-29.030	Public Service Commission		43 MoReg 989R		
4 CSR 240-29.040	Public Service Commission		43 MoReg 990R		
4 CSR 240-29.050	Public Service Commission		43 MoReg 990R		

Rule Number	Agency	Emergency	Proposed	Order	In Addition
4 CSR 240-29.060	Public Service Commission		43 MoReg 991R		
4 CSR 240-29.080	Public Service Commission		43 MoReg 991R		
4 CSR 240-29.090	Public Service Commission		43 MoReg 991R		
4 CSR 240-29.100	Public Service Commission		43 MoReg 992R		
4 CSR 240-29.120	Public Service Commission		43 MoReg 992R		
4 CSR 240-29.130	Public Service Commission		43 MoReg 992R		
4 CSR 240-29.140	Public Service Commission		43 MoReg 993R		
4 CSR 240-29.150	Public Service Commission		43 MoReg 993R		
4 CSR 240-29.160	Public Service Commission		43 MoReg 994R		
4 CSR 240-31.010	Public Service Commission		43 MoReg 994		
4 CSR 240-31.011	Public Service Commission		43 MoReg 996		
4 CSR 240-31.012	Public Service Commission		43 MoReg 996		
4 CSR 240-31.013	Public Service Commission		43 MoReg 997		
4 CSR 240-31.014	Public Service Commission		43 MoReg 997		
4 CSR 240-31.015	Public Service Commission		43 MoReg 998		
4 CSR 240-31.016	Public Service Commission		43 MoReg 999		
4 CSR 240-31.020	Public Service Commission		43 MoReg 1000R		
4 CSR 240-31.030	Public Service Commission		43 MoReg 1000R		
4 CSR 240-31.040	Public Service Commission		43 MoReg 1000R		
4 CSR 240-31.060	Public Service Commission		43 MoReg 1001R		
4 CSR 240-31.090	Public Service Commission		43 MoReg 1001R		
4 CSR 240-31.100	Public Service Commission		43 MoReg 1001R		
4 CSR 240-31.110	Public Service Commission		43 MoReg 1002R		
4 CSR 240-31.120	Public Service Commission		43 MoReg 1002R		
4 CSR 240-31.130	Public Service Commission		43 MoReg 1003R		
4 CSR 240-34.010	Public Service Commission		43 MoReg 1003R		
4 CSR 240-34.020	Public Service Commission		43 MoReg 1003R		
4 CSR 240-34.030	Public Service Commission		43 MoReg 1004R		
4 CSR 240-34.040	Public Service Commission		43 MoReg 1004R		
4 CSR 240-34.050	Public Service Commission		43 MoReg 1004R		
4 CSR 240-34.060	Public Service Commission		43 MoReg 1005R		
4 CSR 240-34.070	Public Service Commission		43 MoReg 1005R		
4 CSR 240-34.080	Public Service Commission		43 MoReg 1005R		
4 CSR 240-34.090	Public Service Commission		43 MoReg 1006R		
4 CSR 240-36.010	Public Service Commission		43 MoReg 1006R		
4 CSR 240-36.020	Public Service Commission		43 MoReg 1007R		
4 CSR 240-36.030	Public Service Commission		43 MoReg 1007R		
4 CSR 240-36.040	Public Service Commission		43 MoReg 1007R		
4 CSR 240-36.050	Public Service Commission		43 MoReg 1008R		
4 CSR 240-37.010	Public Service Commission		43 MoReg 1008R		
4 CSR 240-37.020	Public Service Commission		43 MoReg 1008R		
4 CSR 240-37.030	Public Service Commission		43 MoReg 1009R		
4 CSR 240-37.040	Public Service Commission		43 MoReg 1009R		
4 CSR 240-37.050	Public Service Commission		43 MoReg 1009R		
4 CSR 240-37.060	Public Service Commission		43 MoReg 1010R		
4 CSR 240-40.020	Public Service Commission		43 MoReg 1581		
4 CSR 240-40.030	Public Service Commission		43 MoReg 1583		
4 CSR 240-40.080	Public Service Commission		43 MoReg 1596		
4 CSR 240-120.070	Public Service Commission		43 MoReg 1010R		
4 CSR 240-120.080	Public Service Commission		43 MoReg 1011R		
4 CSR 240-121.010	Public Service Commission		43 MoReg 1011R		
4 CSR 240-121.020	Public Service Commission		43 MoReg 1011R		
4 CSR 240-121.030	Public Service Commission		43 MoReg 1012R		
4 CSR 240-121.040	Public Service Commission		43 MoReg 1012R		
4 CSR 240-121.050	Public Service Commission		43 MoReg 1012R		
4 CSR 240-121.060	Public Service Commission		43 MoReg 1013R		
4 CSR 240-121.170	Public Service Commission		43 MoReg 1013R		
4 CSR 240-121.180	Public Service Commission		43 MoReg 1014R		
4 CSR 240-124.045	Public Service Commission		43 MoReg 1014R		
4 CSR 265-2.010	Division of Motor Carrier and Railroad Safety (Changed to 7 CSR 265-8.005)		43 MoReg 739		
4 CSR 265-2.300	Division of Motor Carrier and Railroad Safety (Changed to 7 CSR 265-8.300)		43 MoReg 740		
4 CSR 265-2.320	Division of Motor Carrier and Railroad Safety (Changed to 7 CSR 265-8.320)		43 MoReg 741		
4 CSR 265-2.322	Division of Motor Carrier and Railroad Safety		43 MoReg 742R		
4 CSR 265-2.324	Division of Motor Carrier and Railroad Safety (Changed to 7 CSR 265-8.324)		43 MoReg 742		
4 CSR 265-8.010	Division of Motor Carrier and Railroad Safety (Changed to 7 CSR 265-8.010)		43 MoReg 743		
4 CSR 265-8.012	Division of Motor Carrier and Railroad Safety (Changed to 7 CSR 265-8.012)		43 MoReg 744		
4 CSR 265-8.018	Division of Motor Carrier and Railroad Safety (Changed to 7 CSR 265-8.018)		43 MoReg 744		
4 CSR 265-8.020	Division of Motor Carrier and Railroad Safety (Changed to 7 CSR 265-8.020)		43 MoReg 745		
4 CSR 265-8.030	Division of Motor Carrier and Railroad Safety (Changed to 7 CSR 265-8.030)		43 MoReg 746		
4 CSR 265-8.032	Division of Motor Carrier and Railroad Safety (Changed to 7 CSR 265-8.032)		43 MoReg 746		
4 CSR 265-8.040	Division of Motor Carrier and Railroad Safety (Changed to 7 CSR 265-8.040)		43 MoReg 747		
4 CSR 265-8.041	Division of Motor Carrier and Railroad Safety		43 MoReg 748R		
4 CSR 265-8.050	Division of Motor Carrier and Railroad Safety		43 MoReg 749R		
4 CSR 265-8.060	Division of Motor Carrier and Railroad Safety (Changed to 7 CSR 265-8.060)		43 MoReg 749		
4 CSR 265-8.070	Division of Motor Carrier and Railroad Safety		43 MoReg 751R		
4 CSR 265-8.071	Division of Motor Carrier and Railroad Safety (Changed to 7 CSR 265-8.071)		43 MoReg 751		
4 CSR 265-8.080	Division of Motor Carrier and Railroad Safety (Changed to 7 CSR 265-8.080)		43 MoReg 752		

Rule Number	Agency	Emergency	Proposed	Order	In Addition
4 CSR 265-8.090	Division of Motor Carrier and Railroad Safety		43 MoReg 753R		
4 CSR 265-8.092	Division of Motor Carrier and Railroad Safety (<i>Changed to 7 CSR 265-8.092</i>)		43 MoReg 753		
4 CSR 265-8.100	Division of Motor Carrier and Railroad Safety (<i>Changed to 7 CSR 265-8.100</i>)		43 MoReg 754		
4 CSR 265-8.110	Division of Motor Carrier and Railroad Safety (<i>Changed to 7 CSR 265-8.110</i>)		43 MoReg 755		
4 CSR 265-8.120	Division of Motor Carrier and Railroad Safety		43 MoReg 755R		
4 CSR 265-8.130	Division of Motor Carrier and Railroad Safety (<i>Changed to 7 CSR 265-8.130</i>)		43 MoReg 755		
4 CSR 265-8.140	Division of Motor Carrier and Railroad Safety (<i>Changed to 7 CSR 265-8.140</i>)		43 MoReg 756		
4 CSR 340-2	Division of Energy				43 MoReg 15
4 CSR 340-2.010	Division of Energy		43 MoReg 835		
4 CSR 340-2.020	Division of Energy		43 MoReg 836		
4 CSR 340-6.010	Division of Energy		43 MoReg 1142		
DEPARTMENT OF ELEMENTARY AND SECONDARY EDUCATION					
5 CSR 20-300.140	Division of Learning Services		43 MoReg 252R		
			This IssueR		
5 CSR 20-400.510	Division of Learning Services		This Issue		
5 CSR 20-400.520	Division of Learning Services		This Issue		
5 CSR 20-400.560	Division of Learning Services		This Issue		
5 CSR 20-400.640	Division of Learning Services		42 MoReg 1581		
			This Issue		
DEPARTMENT OF HIGHER EDUCATION					
6 CSR 10-2.070	Commissioner of Higher Education		This IssueR		
6 CSR 10-4.010	Commissioner of Higher Education		43 MoReg 123		
6 CSR 10-8.010	Commissioner of Higher Education		This IssueR		
6 CSR 10-8.020	Commissioner of Higher Education		This IssueR		
MISSOURI DEPARTMENT OF TRANSPORTATION					
7 CSR	Department of Transportation				41 MoReg 845
7 CSR 10-2.020	Missouri Highways and Transportation Commission		43 MoReg 529		
7 CSR 10-8.005	Missouri Highways and Transportation Commission		43 MoReg 252	43 MoReg 1919	
7 CSR 10-8.011	Missouri Highways and Transportation Commission		43 MoReg 253R	43 MoReg 1920R	
			43 MoReg 253	43 MoReg 1921	
7 CSR 10-8.021	Missouri Highways and Transportation Commission		43 MoReg 254R	43 MoReg 1922R	
7 CSR 10-8.031	Missouri Highways and Transportation Commission		43 MoReg 254R	43 MoReg 1923R	
7 CSR 10-8.041	Missouri Highways and Transportation Commission		43 MoReg 255R	43 MoReg 1923R	
7 CSR 10-8.051	Missouri Highways and Transportation Commission		43 MoReg 255R	43 MoReg 1924R	
7 CSR 10-8.061	Missouri Highways and Transportation Commission		43 MoReg 255R	43 MoReg 1924R	
			43 MoReg 256	43 MoReg 1925	
7 CSR 10-8.071	Missouri Highways and Transportation Commission		43 MoReg 257R	43 MoReg 1926R	
7 CSR 10-8.081	Missouri Highways and Transportation Commission		43 MoReg 257R	43 MoReg 1926R	
7 CSR 10-8.091	Missouri Highways and Transportation Commission		43 MoReg 257R	43 MoReg 1927R	
7 CSR 10-8.101	Missouri Highways and Transportation Commission		43 MoReg 258R	43 MoReg 1927R	
7 CSR 10-8.111	Missouri Highways and Transportation Commission		43 MoReg 258R	43 MoReg 1928R	
7 CSR 10-8.121	Missouri Highways and Transportation Commission		43 MoReg 258R	43 MoReg 1929R	
			43 MoReg 259	43 MoReg 1929	
7 CSR 10-8.131	Missouri Highways and Transportation Commission		43 MoReg 260R	43 MoReg 1931R	
7 CSR 10-8.141	Missouri Highways and Transportation Commission		43 MoReg 260R	43 MoReg 1932R	
7 CSR 10-8.151	Missouri Highways and Transportation Commission		43 MoReg 260R	43 MoReg 1932R	
7 CSR 10-8.161	Missouri Highways and Transportation Commission		43 MoReg 261R	43 MoReg 1933R	
7 CSR 10-11.010	Missouri Highways and Transportation Commission		43 MoReg 1261		
7 CSR 10-11.020	Missouri Highways and Transportation Commission		43 MoReg 1262		
7 CSR 10-11.030	Missouri Highways and Transportation Commission		43 MoReg 1265		
7 CSR 10-13.010	Missouri Highways and Transportation Commission		43 MoReg 530R		
7 CSR 10-16.020	Missouri Highways and Transportation Commission		43 MoReg 530		
7 CSR 10-16.025	Missouri Highways and Transportation Commission		43 MoReg 531		
7 CSR 10-16.035	Missouri Highways and Transportation Commission		43 MoReg 531		
7 CSR 10-16.045	Missouri Highways and Transportation Commission		43 MoReg 532		
7 CSR 10-16.050	Missouri Highways and Transportation Commission		43 MoReg 533		
7 CSR 10-19.010	Missouri Highways and Transportation Commission		42 MoReg 93R		
7 CSR 10-20.010	Missouri Highways and Transportation Commission		43 MoReg 1014		
7 CSR 10-21.010	Missouri Highways and Transportation Commission		43 MoReg 756		
7 CSR 10-24.010	Missouri Highways and Transportation Commission		43 MoReg 39	43 MoReg 1343	
7 CSR 10-24.020	Missouri Highways and Transportation Commission		43 MoReg 41	43 MoReg 1343	
7 CSR 10-24.030	Missouri Highways and Transportation Commission		43 MoReg 41	43 MoReg 1343	
7 CSR 10-24.050	Missouri Highways and Transportation Commission		43 MoReg 42	43 MoReg 1343	
7 CSR 10-24.060	Missouri Highways and Transportation Commission		43 MoReg 43	43 MoReg 1344	
7 CSR 10-24.070	Missouri Highways and Transportation Commission		43 MoReg 43	43 MoReg 1344	
7 CSR 10-24.080	Missouri Highways and Transportation Commission		43 MoReg 43	43 MoReg 1344	
7 CSR 10-24.100	Missouri Highways and Transportation Commission		43 MoReg 44	43 MoReg 1344	
7 CSR 10-24.110	Missouri Highways and Transportation Commission		43 MoReg 44	43 MoReg 1344	
7 CSR 10-24.120	Missouri Highways and Transportation Commission		43 MoReg 45	43 MoReg 1344	
7 CSR 10-24.140	Missouri Highways and Transportation Commission		43 MoReg 45	43 MoReg 1345	
7 CSR 10-24.200	Missouri Highways and Transportation Commission		43 MoReg 46	43 MoReg 1345	
7 CSR 10-24.210	Missouri Highways and Transportation Commission		43 MoReg 46	43 MoReg 1345	
7 CSR 10-24.300	Missouri Highways and Transportation Commission		43 MoReg 46	43 MoReg 1345	
7 CSR 10-24.330	Missouri Highways and Transportation Commission		43 MoReg 47	43 MoReg 1345	
7 CSR 60-2.010	Highway Safety and Traffic Division		43 MoReg 758		
7 CSR 60-2.020	Highway Safety and Traffic Division		43 MoReg 760R		
			43 MoReg 760		
7 CSR 60-2.030	Highway Safety and Traffic Division		43 MoReg 761R		
			43 MoReg 761		
7 CSR 60-2.040	Highway Safety and Traffic Division		43 MoReg 767R		
			43 MoReg 767		
7 CSR 60-2.050	Highway Safety and Traffic Division		43 MoReg 768R		
			43 MoReg 769		

Rule Number	Agency	Emergency	Proposed	Order	In Addition
7 CSR 60-2.060	Highway Safety and Traffic Division		43 MoReg 769R 43 MoReg 770 43 MoReg 739		
7 CSR 265-8.005	Motor Carrier and Railroad Safety (Changed from 4 CSR 265-2.010)				
7 CSR 265-8.010	Motor Carrier and Railroad Safety (Changed from 4 CSR 265-8.010)		43 MoReg 743		
7 CSR 265-8.012	Motor Carrier and Railroad Safety (Changed from 4 CSR 265-8.012)		43 MoReg 744		
7 CSR 265-8.018	Motor Carrier and Railroad Safety (Changed from 4 CSR 265-8.018)		43 MoReg 744		
7 CSR 265-8.020	Motor Carrier and Railroad Safety (Changed from 4 CSR 265-8.020)		43 MoReg 745		
7 CSR 265-8.030	Motor Carrier and Railroad Safety (Changed from 4 CSR 265-8.030)		43 MoReg 746		
7 CSR 265-8.032	Motor Carrier and Railroad Safety (Changed from 4 CSR 265-8.032)		43 MoReg 746		
7 CSR 265-8.040	Motor Carrier and Railroad Safety (Changed from 4 CSR 265-8.040)		43 MoReg 747		
7 CSR 265-8.060	Motor Carrier and Railroad Safety (Changed from 4 CSR 265-8.060)		43 MoReg 749		
7 CSR 265-8.071	Motor Carrier and Railroad Safety (Changed from 4 CSR 265-8.071)		43 MoReg 751		
7 CSR 265-8.080	Motor Carrier and Railroad Safety (Changed from 4 CSR 265-8.080)		43 MoReg 752		
7 CSR 265-8.092	Motor Carrier and Railroad Safety (Changed from 4 CSR 265-8.092)		43 MoReg 753		
7 CSR 265-8.100	Motor Carrier and Railroad Safety (Changed from 4 CSR 265-8.100)		43 MoReg 754		
7 CSR 265-8.110	Motor Carrier and Railroad Safety (Changed from 4 CSR 265-8.110)		43 MoReg 755		
7 CSR 265-8.130	Motor Carrier and Railroad Safety (Changed from 4 CSR 265-8.130)		43 MoReg 755		
7 CSR 265-8.140	Motor Carrier and Railroad Safety (Changed from 4 CSR 265-8.140)		43 MoReg 756		
7 CSR 265-8.300	Motor Carrier and Railroad Safety (Changed from 4 CSR 265-2.300)		43 MoReg 740		
7 CSR 265-8.320	Motor Carrier and Railroad Safety (Changed from 4 CSR 265-2.320)		43 MoReg 741		
7 CSR 265-8.324	Motor Carrier and Railroad Safety (Changed from 4 CSR 265-2.324)		43 MoReg 742		
DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS					
8 CSR	Department of Labor and Industrial Relations				41 MoReg 845
8 CSR 30-1.010	Division of Labor Standards		This Issue		
8 CSR 30-2.010	Division of Labor Standards		This Issue		
8 CSR 30-2.020	Division of Labor Standards		This Issue		
8 CSR 30-3.010	Division of Labor Standards		This Issue		
8 CSR 30-3.020	Division of Labor Standards		This Issue		
8 CSR 30-3.030	Division of Labor Standards		This Issue		
8 CSR 30-3.040	Division of Labor Standards		This Issue		
8 CSR 30-3.050	Division of Labor Standards		This IssueR		
8 CSR 30-3.060	Division of Labor Standards		This Issue		
8 CSR 30-4.010	Division of Labor Standards		This Issue		
8 CSR 30-4.020	Division of Labor Standards		This Issue		
8 CSR 30-4.040	Division of Labor Standards		This Issue		
8 CSR 30-4.050	Division of Labor Standards		This Issue		
8 CSR 30-4.060	Division of Labor Standards		This Issue		
8 CSR 30-5.010	Division of Labor Standards		This Issue		
8 CSR 30-5.020	Division of Labor Standards		This Issue		
8 CSR 30-5.030	Division of Labor Standards		This Issue		
8 CSR 30-6.010	Division of Labor Standards		This Issue		
8 CSR 60-1.010	Missouri Commission on Human Rights		43 MoReg 1143		
8 CSR 60-2.025	Missouri Commission on Human Rights		43 MoReg 1144		
8 CSR 60-2.045	Missouri Commission on Human Rights		43 MoReg 1144		
8 CSR 60-2.085	Missouri Commission on Human Rights		43 MoReg 1145R		
8 CSR 60-2.090	Missouri Commission on Human Rights		43 MoReg 1145		
8 CSR 60-3.010	Missouri Commission on Human Rights		43 MoReg 1145		
8 CSR 60-3.030	Missouri Commission on Human Rights		43 MoReg 1146R		
8 CSR 60-3.060	Missouri Commission on Human Rights		43 MoReg 1146		
DEPARTMENT OF MENTAL HEALTH					
9 CSR	Department of Mental Health				41 MoReg 845
9 CSR 10-1.010	Director, Department of Mental Health		43 MoReg 771		
9 CSR 25-2.005	Fiscal Management		43 MoReg 668		
9 CSR 25-2.105	Fiscal Management		43 MoReg 669		
9 CSR 25-2.305	Fiscal Management		43 MoReg 670		
9 CSR 25-2.405	Fiscal Management		43 MoReg 671		
9 CSR 25-2.505	Fiscal Management		43 MoReg 671		
9 CSR 25-3.040	Fiscal Management		43 MoReg 672		
9 CSR 25-5.010	Fiscal Management		43 MoReg 773R		
9 CSR 30-3.022	Certification Standards		43 MoReg 261R	43 MoReg 1183R	
9 CSR 30-3.134	Certification Standards		43 MoReg 1147		
9 CSR 30-3.201	Certification Standards		43 MoReg 673	43 MoReg 1934	
9 CSR 30-3.202	Certification Standards		43 MoReg 675	43 MoReg 1934	
9 CSR 30-3.204	Certification Standards		43 MoReg 678	43 MoReg 1934	
9 CSR 30-3.206	Certification Standards		43 MoReg 680	43 MoReg 1934	
9 CSR 30-3.208	Certification Standards		43 MoReg 686	43 MoReg 1934	
9 CSR 30-3.300	Certification Standards		43 MoReg 773		
9 CSR 40-1.118	Licensing Rules		43 MoReg 837R		
9 CSR 45-4.010	Division of Developmental Disabilities		43 MoReg 837R		
9 CSR 45-5.105	Division of Developmental Disabilities		43 MoReg 838		

Rule Number	Agency	Emergency	Proposed	Order	In Addition
9 CSR 45-5.110	Division of Developmental Disabilities		43 MoReg 838		
9 CSR 45-5.130	Division of Developmental Disabilities		43 MoReg 842		
9 CSR 45-5.140	Division of Developmental Disabilities		43 MoReg 846		
9 CSR 45-5.150	Division of Developmental Disabilities		43 MoReg 850		
9 CSR 45-6.010	Division of Developmental Disabilities		43 MoReg 261R	43 MoReg 1183R	
DEPARTMENT OF NATURAL RESOURCES					
10 CSR	Department of Natural Resources				41 MoReg 845
10 CSR 1-1.010	Director's Office		43 MoReg 687		
10 CSR 1-2.030	Director's Office		43 MoReg 134R	43 MoReg 1477R	
10 CSR 1-3.010	Director's Office		This Issue		
10 CSR 10-1.010	Air Conservation Commission		43 MoReg 853		
10 CSR 10-2.205	Air Conservation Commission		This Issue		
10 CSR 10-2.215	Air Conservation Commission		43 MoReg 1015R		
10 CSR 10-2.230	Air Conservation Commission		This Issue		
10 CSR 10-2.260	Air Conservation Commission		43 MoReg 1266		
10 CSR 10-2.300	Air Conservation Commission		43 MoReg 1270		
10 CSR 10-2.310	Air Conservation Commission		43 MoReg 262R	This IssueR	
10 CSR 10-2.320	Air Conservation Commission		43 MoReg 1016		
10 CSR 10-2.340	Air Conservation Commission		43 MoReg 1017		
10 CSR 10-2.360	Air Conservation Commission		43 MoReg 262R	This IssueR	
10 CSR 10-2.390	Air Conservation Commission		43 MoReg 1018R		
10 CSR 10-3.160	Air Conservation Commission		43 MoReg 262R	This IssueR	
10 CSR 10-5.120	Air Conservation Commission		43 MoReg 263R	This IssueR	
10 CSR 10-5.130	Air Conservation Commission		43 MoReg 263R	This IssueR	
10 CSR 10-5.220	Air Conservation Commission		This Issue		
10 CSR 10-5.295	Air Conservation Commission		This Issue		
10 CSR 10-5.330	Air Conservation Commission		This Issue		
10 CSR 10-5.360	Air Conservation Commission		43 MoReg 1019R		
10 CSR 10-5.370	Air Conservation Commission		43 MoReg 1019R		
10 CSR 10-5.410	Air Conservation Commission		43 MoReg 1020R		
10 CSR 10-5.440	Air Conservation Commission		43 MoReg 1020R		
10 CSR 10-5.450	Air Conservation Commission		43 MoReg 264R	This IssueR	
10 CSR 10-5.455	Air Conservation Commission		43 MoReg 1020R		
10 CSR 10-5.500	Air Conservation Commission		43 MoReg 1272		
10 CSR 10-5.520	Air Conservation Commission		43 MoReg 1021R		
10 CSR 10-5.530	Air Conservation Commission		43 MoReg 1277		
10 CSR 10-5.540	Air Conservation Commission		43 MoReg 1282		
10 CSR 10-5.570	Air Conservation Commission		43 MoReg 1021		
10 CSR 10-6.030	Air Conservation Commission		43 MoReg 1024		
10 CSR 10-6.040	Air Conservation Commission		43 MoReg 1026		
10 CSR 10-6.045	Air Conservation Commission		This Issue		
10 CSR 10-6.060	Air Conservation Commission		This Issue		
10 CSR 10-6.062	Air Conservation Commission		This Issue		
10 CSR 10-6.065	Air Conservation Commission		This Issue		
10 CSR 10-6.070	Air Conservation Commission		43 MoReg 1287		
10 CSR 10-6.075	Air Conservation Commission		43 MoReg 1293		
10 CSR 10-6.080	Air Conservation Commission		43 MoReg 1301		
10 CSR 10-6.100	Air Conservation Commission		43 MoReg 264R	This IssueR	
10 CSR 10-6.110	Air Conservation Commission		43 MoReg 1029		
10 CSR 10-6.120	Air Conservation Commission		43 MoReg 1303		
10 CSR 10-6.130	Air Conservation Commission		43 MoReg 1304		
10 CSR 10-6.161	Air Conservation Commission		43 MoReg 1312		
10 CSR 10-6.170	Air Conservation Commission		This Issue		
10 CSR 10-6.180	Air Conservation Commission		43 MoReg 855		
10 CSR 10-6.200	Air Conservation Commission		43 MoReg 1032		
10 CSR 10-6.220	Air Conservation Commission		This Issue		
10 CSR 10-6.241	Air Conservation Commission		43 MoReg 1313		
10 CSR 10-6.250	Air Conservation Commission		43 MoReg 1316		
10 CSR 10-6.261	Air Conservation Commission		This Issue		
10 CSR 10-6.280	Air Conservation Commission		43 MoReg 1319		
10 CSR 10-6.300	Air Conservation Commission		43 MoReg 1320		
10 CSR 10-6.330	Air Conservation Commission		This Issue		
10 CSR 10-6.350	Air Conservation Commission		43 MoReg 265R	This IssueR	
10 CSR 10-6.360	Air Conservation Commission		43 MoReg 265R	This IssueR	
10 CSR 10-6.362	Air Conservation Commission		43 MoReg 1046R		
10 CSR 10-6.364	Air Conservation Commission		43 MoReg 1047R		
10 CSR 10-6.366	Air Conservation Commission		43 MoReg 1047R		
10 CSR 10-6.372	Air Conservation Commission		This Issue		
10 CSR 10-6.374	Air Conservation Commission		This Issue		
10 CSR 10-6.376	Air Conservation Commission		This Issue		
10 CSR 10-6.380	Air Conservation Commission		43 MoReg 1326		
10 CSR 10-6.390	Air Conservation Commission		This Issue		
10 CSR 20-1.010	Clean Water Commission		43 MoReg 134R	This IssueR	
10 CSR 20-1.020	Clean Water Commission		43 MoReg 135R	This IssueR	
10 CSR 20-2.010	Clean Water Commission		43 MoReg 1148		
10 CSR 20-4.010	Clean Water Commission		43 MoReg 1596R		
10 CSR 20-4.020	Clean Water Commission		43 MoReg 135R	This IssueR	
10 CSR 20-4.021	Clean Water Commission		43 MoReg 135R	This IssueR	
10 CSR 20-4.022	Clean Water Commission		43 MoReg 135R	This IssueR	
10 CSR 20-4.030	Clean Water Commission		43 MoReg 1596		
10 CSR 20-4.040	Clean Water Commission		43 MoReg 1598		
10 CSR 20-4.041	Clean Water Commission		43 MoReg 1609		
10 CSR 20-4.042	Clean Water Commission		43 MoReg 1611R		
10 CSR 20-4.043	Clean Water Commission		43 MoReg 136R	This IssueR	
10 CSR 20-4.049	Clean Water Commission		43 MoReg 136R	This IssueR	
10 CSR 20-4.050	Clean Water Commission		43 MoReg 1611		
10 CSR 20-4.060	Clean Water Commission		43 MoReg 136R	This IssueR	
10 CSR 20-4.061	Clean Water Commission		43 MoReg 1615		
10 CSR 20-4.070	Clean Water Commission		43 MoReg 137R	This IssueR	
10 CSR 20-6.010	Clean Water Commission		43 MoReg 1618		

Rule Number	Agency	Emergency	Proposed	Order	In Addition
10 CSR 20-6.011	Clean Water Commission		43 MoReg 1629		
10 CSR 20-6.015	Clean Water Commission		43 MoReg 1632		
10 CSR 20-6.020	Clean Water Commission		43 MoReg 1633		
10 CSR 20-6.070	Clean Water Commission		43 MoReg 1635		
10 CSR 20-6.090	Clean Water Commission		43 MoReg 1637		
10 CSR 20-6.200	Clean Water Commission		43 MoReg 1642		
10 CSR 20-6.300	Clean Water Commission		43 MoReg 1652		
10 CSR 20-7.015	Clean Water Commission		43 MoReg 1655		
10 CSR 20-8.020	Clean Water Commission		43 MoReg 1669R		
10 CSR 20-8.110	Clean Water Commission		43 MoReg 1669		
10 CSR 20-8.120	Clean Water Commission		43 MoReg 1680		
10 CSR 20-8.125	Clean Water Commission		43 MoReg 1685		
10 CSR 20-8.130	Clean Water Commission		43 MoReg 1687		
10 CSR 20-8.140	Clean Water Commission		43 MoReg 1692		
10 CSR 20-8.150	Clean Water Commission		43 MoReg 1699		
10 CSR 20-8.160	Clean Water Commission		43 MoReg 1702		
10 CSR 20-8.170	Clean Water Commission		43 MoReg 1705		
10 CSR 20-8.180	Clean Water Commission		43 MoReg 1710		
10 CSR 20-8.190	Clean Water Commission		43 MoReg 1716		
10 CSR 20-8.200	Clean Water Commission		43 MoReg 1719		
10 CSR 20-8.210	Clean Water Commission		43 MoReg 1726		
10 CSR 20-8.220	Clean Water Commission		43 MoReg 1730R		
10 CSR 20-8.300	Clean Water Commission		43 MoReg 1731		
10 CSR 20-8.500	Clean Water Commission		43 MoReg 1738		
10 CSR 20-9.010	Clean Water Commission		43 MoReg 1742		
10 CSR 20-9.020	Clean Water Commission		43 MoReg 1743		
10 CSR 20-9.030	Clean Water Commission		43 MoReg 1746		
10 CSR 20-14.010	Clean Water Commission		43 MoReg 1749		
10 CSR 20-14.020	Clean Water Commission		43 MoReg 1749		
10 CSR 22-1.010	Dam and Reservoir Safety Council		43 MoReg 137R	43 MoReg 1477R	
10 CSR 22-1.020	Dam and Reservoir Safety Council		This Issue		
10 CSR 22-1.030	Dam and Reservoir Safety Council		43 MoReg 137R	43 MoReg 1477R	
10 CSR 22-2.010	Dam and Reservoir Safety Council		This Issue		
10 CSR 22-2.020	Dam and Reservoir Safety Council		This Issue		
10 CSR 22-2.060	Dam and Reservoir Safety Council		43 MoReg 137R	43 MoReg 1478R	
10 CSR 22-2.100	Dam and Reservoir Safety Council		This Issue		
10 CSR 22-3.020	Dam and Reservoir Safety Council		This Issue		
10 CSR 22-3.030	Dam and Reservoir Safety Council		This Issue		
10 CSR 22-3.040	Dam and Reservoir Safety Council		This Issue		
10 CSR 22-3.050	Dam and Reservoir Safety Council		This Issue		
10 CSR 22-4.010	Dam and Reservoir Safety Council		43 MoReg 138R	43 MoReg 1478R	
10 CSR 22-4.020	Dam and Reservoir Safety Council		This Issue		
10 CSR 23-1.010	Well Installation		This Issue		
10 CSR 23-1.020	Division of Geology and Land Survey		43 MoReg 138R	43 MoReg 1478R	
10 CSR 23-1.030	Division of Geology and Land Survey		This IssueR		
10 CSR 23-1.040	Well Installation		This Issue		
10 CSR 23-1.050	Well Installation		This Issue		
10 CSR 23-1.060	Division of Geology and Land Survey		This IssueR		
10 CSR 23-1.075	Well Installation		This Issue		
10 CSR 23-1.080	Division of Geology and Land Survey		This IssueR		
10 CSR 23-1.090	Well Installation		This Issue		
10 CSR 23-1.105	Well Installation		This Issue		
10 CSR 23-1.130	Division of Geology and Land Survey		This IssueR		
10 CSR 23-1.140	Well Installation		This Issue		
10 CSR 23-1.155	Division of Geology and Land Survey		This IssueR		
10 CSR 23-1.160	Well Installation		This Issue		
10 CSR 23-2.010	Well Installation		This Issue		
10 CSR 23-2.020	Well Installation		This Issue		
10 CSR 23-3.010	Well Installation		This Issue		
10 CSR 23-3.020	Well Installation		This Issue		
10 CSR 23-3.025	Division of Geology and Land Survey		43 MoReg 138R	43 MoReg 1478R	
10 CSR 23-3.030	Well Installation		This Issue		
10 CSR 23-3.040	Division of Geology and Land Survey		This IssueR		
10 CSR 23-3.050	Well Installation		This Issue		
10 CSR 23-3.060	Division of Geology and Land Survey		This IssueR		
10 CSR 23-3.070	Division of Geology and Land Survey		This IssueR		
10 CSR 23-3.080	Well Installation		This Issue		
10 CSR 23-3.090	Well Installation		This Issue		
10 CSR 23-3.100	Division of Geology and Land Survey		This IssueR		
10 CSR 23-3.110	Well Installation		This Issue		
10 CSR 23-4.010	Division of Geology and Land Survey		This IssueR		
10 CSR 23-4.020	Division of Geology and Land Survey		This IssueR		
10 CSR 23-4.030	Division of Geology and Land Survey		This IssueR		
10 CSR 23-4.050	Well Installation		This Issue		
10 CSR 23-4.060	Well Installation		This Issue		
10 CSR 23-4.080	Well Installation		This Issue		
10 CSR 23-5.010	Division of Geology and Land Survey		This IssueR		
10 CSR 23-5.020	Division of Geology and Land Survey		This IssueR		
10 CSR 23-5.030	Well Installation		This Issue		
10 CSR 23-5.040	Well Installation		This Issue		
10 CSR 23-5.050	Well Installation		This Issue		
10 CSR 23-5.060	Well Installation		This Issue		
10 CSR 23-5.070	Well Installation		43 MoReg 1153R		
10 CSR 23-5.080	Division of Geology and Land Survey		This Issue		
10 CSR 23-6.010	Division of Geology and Land Survey		This IssueR		
10 CSR 23-6.020	Well Installation		This Issue		
10 CSR 23-6.030	Well Installation		This Issue		
10 CSR 23-6.040	Well Installation		This Issue		
10 CSR 23-6.050	Well Installation		This Issue		
10 CSR 23-6.060	Division of Geology and Land Survey		This IssueR		

Rule Number	Agency	Emergency	Proposed	Order	In Addition
10 CSR 24-1.010	Hazardous Substance Emergency Response Office		43 MoReg 856		
10 CSR 24-2.010	Hazardous Substance Emergency Response Office		43 MoReg 138R	43 MoReg 1478R	
10 CSR 24-3.010	Hazardous Substance Emergency Response Office		43 MoReg 139R	43 MoReg 1478R	
10 CSR 25-1.010	Hazardous Waste Management Commission		43 MoReg 265R	43 MoReg 1935R	
10 CSR 25-2.010	Hazardous Waste Management Commission		43 MoReg 1759		
10 CSR 25-2.020	Hazardous Waste Management Commission		43 MoReg 1759R		
10 CSR 25-3.260	Hazardous Waste Management Commission		43 MoReg 1759		
10 CSR 25-4.261	Hazardous Waste Management Commission		43 MoReg 1761		
10 CSR 25-5.262	Hazardous Waste Management Commission		43 MoReg 1765		
10 CSR 25-6.263	Hazardous Waste Management Commission		43 MoReg 1767		
10 CSR 25-7.264	Hazardous Waste Management Commission		43 MoReg 1772		
10 CSR 25-7.265	Hazardous Waste Management Commission		43 MoReg 1774		
10 CSR 25-7.266	Hazardous Waste Management Commission		43 MoReg 1777		
10 CSR 25-7.270	Hazardous Waste Management Commission		43 MoReg 1778		
10 CSR 25-8.124	Hazardous Waste Management Commission		43 MoReg 1779		
10 CSR 25-9.020	Hazardous Waste Management Commission		43 MoReg 1787R		
10 CSR 25-10.010	Hazardous Waste Management Commission		43 MoReg 1790R		
10 CSR 25-11.279	Hazardous Waste Management Commission		43 MoReg 1790		
10 CSR 25-12.010	Hazardous Waste Management Commission		43 MoReg 1792		
10 CSR 25-13.010	Hazardous Waste Management Commission		43 MoReg 1795		
10 CSR 25-15.010	Hazardous Waste Management Commission		43 MoReg 1798		
10 CSR 25-16.273	Hazardous Waste Management Commission		43 MoReg 1800		
10 CSR 25-17.010	Hazardous Waste Management Commission		43 MoReg 266R	43 MoReg 1935R	
10 CSR 25-17.020	Hazardous Waste Management Commission		43 MoReg 266R	43 MoReg 1935R	
10 CSR 25-17.030	Hazardous Waste Management Commission		43 MoReg 266R	43 MoReg 1935R	
10 CSR 25-17.040	Hazardous Waste Management Commission		43 MoReg 267R	43 MoReg 1935R	
10 CSR 25-17.050	Hazardous Waste Management Commission		43 MoReg 267R	43 MoReg 1936R	
10 CSR 25-17.060	Hazardous Waste Management Commission		43 MoReg 267R	43 MoReg 1936R	
10 CSR 25-17.070	Hazardous Waste Management Commission		43 MoReg 268R	43 MoReg 1936R	
10 CSR 25-17.080	Hazardous Waste Management Commission		43 MoReg 268R	43 MoReg 1936R	
10 CSR 25-17.090	Hazardous Waste Management Commission		43 MoReg 268R	43 MoReg 1936R	
10 CSR 25-17.100	Hazardous Waste Management Commission		43 MoReg 269R	43 MoReg 1937R	
10 CSR 25-17.110	Hazardous Waste Management Commission		43 MoReg 269R	43 MoReg 1937R	
10 CSR 25-17.120	Hazardous Waste Management Commission		43 MoReg 269R	43 MoReg 1937R	
10 CSR 25-17.130	Hazardous Waste Management Commission		43 MoReg 270R	43 MoReg 1937R	
10 CSR 25-17.140	Hazardous Waste Management Commission		43 MoReg 270R	43 MoReg 1938R	
10 CSR 25-17.150	Hazardous Waste Management Commission		43 MoReg 270R	43 MoReg 1938R	
10 CSR 25-17.160	Hazardous Waste Management Commission		43 MoReg 271R	43 MoReg 1938R	
10 CSR 25-17.170	Hazardous Waste Management Commission		43 MoReg 271R	43 MoReg 1938R	
10 CSR 25-19.010	Hazardous Waste Management Commission		43 MoReg 856		
10 CSR 26-1.010	Petroleum and Hazardous Substance Storage Tanks		43 MoReg 271R	43 MoReg 1938R	
10 CSR 26-2.080	Petroleum and Hazardous Substance Storage Tanks		This Issue		
10 CSR 40-1.010	Missouri Mining Commission		43 MoReg 272R	43 MoReg 1479R	
10 CSR 40-2.010	Missouri Mining Commission		43 MoReg 272R	43 MoReg 1479R	
10 CSR 40-2.020	Missouri Mining Commission		43 MoReg 272R	43 MoReg 1479R	
10 CSR 40-2.030	Missouri Mining Commission		43 MoReg 273R	43 MoReg 1479R	
10 CSR 40-2.040	Missouri Mining Commission		43 MoReg 273R	43 MoReg 1479R	
10 CSR 40-2.050	Missouri Mining Commission		43 MoReg 273R	43 MoReg 1479R	
10 CSR 40-2.060	Missouri Mining Commission		43 MoReg 273R	43 MoReg 1480R	
10 CSR 40-2.070	Missouri Mining Commission		43 MoReg 274R	43 MoReg 1480R	
10 CSR 40-2.080	Missouri Mining Commission		43 MoReg 274R	43 MoReg 1480R	
10 CSR 40-2.090	Missouri Mining Commission		43 MoReg 274R	43 MoReg 1480R	
10 CSR 40-2.100	Missouri Mining Commission		43 MoReg 274R	43 MoReg 1480R	
10 CSR 40-2.110	Missouri Mining Commission		43 MoReg 275R	43 MoReg 1480R	
10 CSR 40-3.060	Missouri Mining Commission		43 MoReg 859		
10 CSR 40-3.170	Missouri Mining Commission		43 MoReg 862		
10 CSR 40-3.180	Missouri Mining Commission		43 MoReg 863R		
10 CSR 40-3.190	Missouri Mining Commission		43 MoReg 863R		
10 CSR 40-3.200	Missouri Mining Commission		43 MoReg 863R		
10 CSR 40-3.210	Missouri Mining Commission		43 MoReg 863R		
10 CSR 40-3.220	Missouri Mining Commission		43 MoReg 864R		
10 CSR 40-3.230	Missouri Mining Commission		43 MoReg 864R		
10 CSR 40-3.240	Missouri Mining Commission		43 MoReg 864R		
10 CSR 40-3.250	Missouri Mining Commission		43 MoReg 864R		
10 CSR 40-3.260	Missouri Mining Commission		43 MoReg 865R		
10 CSR 40-3.270	Missouri Mining Commission		43 MoReg 865R		
10 CSR 40-3.280	Missouri Mining Commission		43 MoReg 865R		
10 CSR 40-3.290	Missouri Mining Commission		43 MoReg 865R		
10 CSR 40-3.300	Missouri Mining Commission		43 MoReg 866R		
10 CSR 40-3.310	Missouri Mining Commission		43 MoReg 866R		
10 CSR 40-4.020	Missouri Mining Commission		43 MoReg 866		
10 CSR 40-4.040	Missouri Mining Commission		43 MoReg 867		
10 CSR 40-4.060	Missouri Mining Commission		43 MoReg 868		
10 CSR 40-4.070	Missouri Mining Commission		43 MoReg 869		
10 CSR 40-6.100	Missouri Mining Commission		43 MoReg 870		
10 CSR 40-6.110	Missouri Mining Commission		43 MoReg 872R		
10 CSR 40-6.120	Missouri Mining Commission		43 MoReg 872R		
10 CSR 40-9.010	Missouri Mining Commission		43 MoReg 873		
10 CSR 40-9.020	Missouri Mining Commission		43 MoReg 873		
10 CSR 40-9.030	Missouri Mining Commission		43 MoReg 874		
10 CSR 40-9.040	Missouri Mining Commission		43 MoReg 875		
10 CSR 40-9.050	Missouri Mining Commission		43 MoReg 876		
10 CSR 40-9.060	Missouri Mining Commission		43 MoReg 877		
10 CSR 40-10.010	Missouri Mining Commission		43 MoReg 877		
10 CSR 40-10.030	Missouri Mining Commission		43 MoReg 878		
10 CSR 40-10.040	Missouri Mining Commission		43 MoReg 879		

Rule Number	Agency	Emergency	Proposed	Order	In Addition
10 CSR 40-10.060	Missouri Mining Commission		43 MoReg 275R	43 MoReg 1481R	
10 CSR 40-10.080	Missouri Mining Commission		43 MoReg 880		
10 CSR 40-10.090	Missouri Mining Commission		43 MoReg 275R	43 MoReg 1481R	
10 CSR 40-10.100	Missouri Mining Commission		43 MoReg 882		
10 CSR 45-1.010	Metallic Minerals Waste Management		43 MoReg 275R	43 MoReg 1481R	
10 CSR 45-3.010	Metallic Minerals Waste Management		43 MoReg 883		
10 CSR 45-6.020	Metallic Minerals Waste Management		43 MoReg 884		
10 CSR 45-8.010	Metallic Minerals Waste Management		43 MoReg 885		
10 CSR 45-8.030	Metallic Minerals Waste Management		43 MoReg 886		
10 CSR 45-8.040	Metallic Minerals Waste Management		43 MoReg 886		
10 CSR 50-1.010	Oil and Gas Council		43 MoReg 139R	43 MoReg 1481R	
10 CSR 50-1.020	Oil and Gas Council		This Issue		
10 CSR 50-1.030	Oil and Gas Council		This Issue		
10 CSR 50-1.050	Oil and Gas Council		This Issue		
10 CSR 50-2.010	Oil and Gas Council		This Issue		
10 CSR 50-2.020	Oil and Gas Council		This Issue		
10 CSR 50-2.030	Oil and Gas Council		This Issue		
10 CSR 50-2.040	Oil and Gas Council		This Issue		
10 CSR 50-2.055	Oil and Gas Council		This Issue		
10 CSR 50-2.060	Oil and Gas Council		This Issue		
10 CSR 50-2.065	Oil and Gas Council		This Issue		
10 CSR 50-2.080	Oil and Gas Council		This Issue		
10 CSR 50-2.090	Oil and Gas Council		This Issue		
10 CSR 60-1.010	Safe Drinking Water Commission		43 MoReg 139R	This IssueR	
10 CSR 60-2.015	Safe Drinking Water Commission		43 MoReg 1047		
10 CSR 60-3.010	Safe Drinking Water Commission		43 MoReg 1802		
10 CSR 60-3.020	Safe Drinking Water Commission		43 MoReg 1803		
10 CSR 60-3.030	Safe Drinking Water Commission		43 MoReg 1804		
10 CSR 60-4.020	Safe Drinking Water Commission		43 MoReg 140R	This IssueR	
10 CSR 60-4.022	Safe Drinking Water Commission		43 MoReg 1805		
10 CSR 60-4.025	Safe Drinking Water Commission		43 MoReg 1809		
10 CSR 60-4.050	Safe Drinking Water Commission		43 MoReg 1812		
10 CSR 60-4.052	Safe Drinking Water Commission		43 MoReg 1813		
10 CSR 60-4.055	Safe Drinking Water Commission		43 MoReg 1816		
10 CSR 60-4.060	Safe Drinking Water Commission		43 MoReg 1819		
10 CSR 60-4.080	Safe Drinking Water Commission		43 MoReg 1820		
10 CSR 60-4.090	Safe Drinking Water Commission		43 MoReg 1824R		
10 CSR 60-4.092	Safe Drinking Water Commission		43 MoReg 140R	This IssueR	
10 CSR 60-4.094	Safe Drinking Water Commission		43 MoReg 1824		
10 CSR 60-4.100	Safe Drinking Water Commission		43 MoReg 1834		
10 CSR 60-4.110	Safe Drinking Water Commission		43 MoReg 140R	This IssueR	
10 CSR 60-6.050	Safe Drinking Water Commission		43 MoReg 1050R		
10 CSR 60-6.060	Safe Drinking Water Commission		43 MoReg 1835		
10 CSR 60-6.070	Safe Drinking Water Commission		43 MoReg 1836		
10 CSR 60-7.010	Safe Drinking Water Commission		43 MoReg 1837		
10 CSR 60-8.010	Safe Drinking Water Commission		43 MoReg 1843		
10 CSR 60-8.030	Safe Drinking Water Commission		43 MoReg 1848		
10 CSR 60-9.010	Safe Drinking Water Commission		43 MoReg 1860		
10 CSR 60-10.010	Safe Drinking Water Commission		43 MoReg 1050		
10 CSR 60-11.010	Safe Drinking Water Commission		43 MoReg 1860		
10 CSR 60-11.030	Safe Drinking Water Commission		43 MoReg 1861		
10 CSR 60-13.010	Safe Drinking Water Commission		43 MoReg 1861		
10 CSR 60-13.020	Safe Drinking Water Commission		43 MoReg 1863		
10 CSR 60-13.025	Safe Drinking Water Commission		43 MoReg 1875		
10 CSR 60-13.030	Safe Drinking Water Commission		43 MoReg 1885		
10 CSR 60-14.010	Safe Drinking Water Commission		43 MoReg 1888		
10 CSR 60-14.020	Safe Drinking Water Commission		43 MoReg 1891		
10 CSR 60-16.010	Safe Drinking Water Commission		43 MoReg 1051		
10 CSR 60-16.020	Safe Drinking Water Commission		43 MoReg 1053		
10 CSR 60-16.030	Safe Drinking Water Commission		43 MoReg 1053		
10 CSR 70-1.010	Soil and Water Districts Commission		43 MoReg 140R	43 MoReg 1481R	
10 CSR 70-2.010	Soil and Water Districts Commission		43 MoReg 1437		
10 CSR 70-2.020	Soil and Water Districts Commission		43 MoReg 1438		
10 CSR 70-3.010	Soil and Water Districts Commission		43 MoReg 1439		
10 CSR 70-4.010	Soil and Water Districts Commission		43 MoReg 1441		
10 CSR 70-5.010	Soil and Water Districts Commission		43 MoReg 1441		
10 CSR 70-5.020	Soil and Water Districts Commission		43 MoReg 1442		
10 CSR 70-5.030	Soil and Water Districts Commission		43 MoReg 1444		
10 CSR 70-5.040	Soil and Water Districts Commission		43 MoReg 1445		
10 CSR 70-5.050	Soil and Water Districts Commission		43 MoReg 1445		
10 CSR 70-5.060	Soil and Water Districts Commission		43 MoReg 1447		
10 CSR 70-6.010	Soil and Water Districts Commission		43 MoReg 1448		
10 CSR 70-7.100	Soil and Water Districts Commission		43 MoReg 141R	43 MoReg 1481R	
10 CSR 70-7.110	Soil and Water Districts Commission		43 MoReg 141R	43 MoReg 1482R	
10 CSR 70-7.120	Soil and Water Districts Commission		43 MoReg 141R	43 MoReg 1482R	
10 CSR 70-7.130	Soil and Water Districts Commission		43 MoReg 142R	43 MoReg 1482R	
10 CSR 70-7.140	Soil and Water Districts Commission		43 MoReg 142R	43 MoReg 1482R	
10 CSR 70-7.150	Soil and Water Districts Commission		43 MoReg 142R	43 MoReg 1482R	
10 CSR 70-8.010	Soil and Water Districts Commission		43 MoReg 143R	43 MoReg 1482R	
10 CSR 70-8.020	Soil and Water Districts Commission		43 MoReg 143R	43 MoReg 1483R	
10 CSR 70-8.030	Soil and Water Districts Commission		43 MoReg 143R	43 MoReg 1483R	
10 CSR 70-8.040	Soil and Water Districts Commission		43 MoReg 143R	43 MoReg 1483R	
10 CSR 70-8.050	Soil and Water Districts Commission		43 MoReg 144R	43 MoReg 1483R	
10 CSR 70-8.060	Soil and Water Districts Commission		43 MoReg 144R	43 MoReg 1483R	
10 CSR 70-8.070	Soil and Water Districts Commission		43 MoReg 144R	43 MoReg 1483R	
10 CSR 70-8.080	Soil and Water Districts Commission		43 MoReg 145R	43 MoReg 1484R	
10 CSR 70-8.090	Soil and Water Districts Commission		43 MoReg 145R	43 MoReg 1484R	
10 CSR 70-8.100	Soil and Water Districts Commission		43 MoReg 145R	43 MoReg 1484R	
10 CSR 70-8.110	Soil and Water Districts Commission		43 MoReg 146R	43 MoReg 1484R	
10 CSR 70-8.120	Soil and Water Districts Commission		43 MoReg 146R	43 MoReg 1484R	
10 CSR 80-1.010	Solid Waste Management		43 MoReg 146R	43 MoReg 1484R	

Rule Number	Agency	Emergency	Proposed	Order	In Addition
10 CSR 80-2.050	Solid Waste Management		43 MoReg 146R	43 MoReg 1485R	
10 CSR 80-2.060	Solid Waste Management		43 MoReg 147R	43 MoReg 1485R	
10 CSR 80-2.070	Solid Waste Management		43 MoReg 147R	43 MoReg 1485R	
10 CSR 80-3.010	Solid Waste Management		This Issue		
10 CSR 80-4.010	Solid Waste Management		This IssueR		
10 CSR 80-6.010	Solid Waste Management		43 MoReg 1892R		
10 CSR 80-7.010	Solid Waste Management		43 MoReg 1893		
10 CSR 80-8.020	Solid Waste Management		43 MoReg 1895		
10 CSR 80-8.030	Solid Waste Management		43 MoReg 1896		
10 CSR 80-8.050	Solid Waste Management		43 MoReg 1897		
10 CSR 80-8.060	Solid Waste Management		43 MoReg 147R	43 MoReg 1485R	
10 CSR 80-9.030	Solid Waste Management		43 MoReg 1054		
10 CSR 80-9.035	Solid Waste Management		43 MoReg 1055		
10 CSR 80-9.040	Solid Waste Management		43 MoReg 148R	43 MoReg 1485R	
10 CSR 80-10.040	Solid Waste Management		43 MoReg 148R	43 MoReg 1486R	
10 CSR 90-1.010	State Parks		43 MoReg 148R	43 MoReg 1486R	
10 CSR 90-2.010	State Parks		43 MoReg 1905		
10 CSR 90-2.020	State Parks		43 MoReg 1906		
10 CSR 90-2.030	State Parks		43 MoReg 1908		
10 CSR 90-2.040	State Parks		43 MoReg 1912		
10 CSR 90-2.050	State Parks		43 MoReg 1913		
10 CSR 90-2.060	State Parks		43 MoReg 149R	43 MoReg 1486R	
10 CSR 90-2.070	State Parks		43 MoReg 1914		
10 CSR 90-3.010	State Parks		43 MoReg 887		
10 CSR 90-3.020	State Parks		43 MoReg 887		
10 CSR 90-3.030	State Parks		43 MoReg 888		
10 CSR 90-3.050	State Parks		43 MoReg 149R	43 MoReg 1486R	
10 CSR 90-3.060	State Parks		43 MoReg 149R	43 MoReg 1486R	
10 CSR 90-3.070	State Parks		43 MoReg 150R	43 MoReg 1486R	
10 CSR 90-3.080	State Parks		43 MoReg 150R	43 MoReg 1487R	
10 CSR 100-2.010	Petroleum Storage Tank Insurance Fund Board of Trustees		43 MoReg 534	This Issue	
10 CSR 100-4.010	Petroleum Storage Tank Insurance Fund Board of Trustees		43 MoReg 535	This Issue	
10 CSR 100-4.020	Petroleum Storage Tank Insurance Fund Board of Trustees		43 MoReg 541	This Issue	
10 CSR 100-5.010	Petroleum Storage Tank Insurance Fund Board of Trustees		43 MoReg 545	This Issue	
10 CSR 100-5.030	Petroleum Storage Tank Insurance Fund Board of Trustees		43 MoReg 546	This Issue	
10 CSR 100-6.010	Petroleum Storage Tank Insurance Fund Board of Trustees		43 MoReg 546	This Issue	
10 CSR 130-1.010	State Environmental Improvement and Energy Resources Authority		This Issue		
10 CSR 130-1.020	State Environmental Improvement and Energy Resources Authority		This Issue		
DEPARTMENT OF PUBLIC SAFETY					
11 CSR	Department of Public Safety				42 MoReg 990
11 CSR 30-8.010	Office of the Director		43 MoReg 1328R		
11 CSR 30-8.020	Office of the Director		43 MoReg 1328R		
11 CSR 30-8.030	Office of the Director		43 MoReg 1328R		
11 CSR 30-8.040	Office of the Director		43 MoReg 1328R		
11 CSR 30-9.010	Office of the Director		43 MoReg 1329R		
11 CSR 30-9.020	Office of the Director		43 MoReg 1329R		
11 CSR 30-9.030	Office of the Director		43 MoReg 1329R		
11 CSR 30-9.040	Office of the Director		43 MoReg 1329R		
11 CSR 30-9.050	Office of the Director		43 MoReg 1330R		
11 CSR 30-16.010	Office of the Director		42 MoReg 180		
11 CSR 30-16.020	Office of the Director		42 MoReg 182		
11 CSR 45-1.015	Missouri Gaming Commission		43 MoReg 1153		
11 CSR 45-1.040	Missouri Gaming Commission		43 MoReg 48R	43 MoReg 1183R	
11 CSR 45-1.090	Missouri Gaming Commission		43 MoReg 1155		
11 CSR 45-3.010	Missouri Gaming Commission		43 MoReg 688		
11 CSR 45-4.020	Missouri Gaming Commission		43 MoReg 1156		
11 CSR 45-4.070	Missouri Gaming Commission		43 MoReg 48R	43 MoReg 1183R	
11 CSR 45-4.085	Missouri Gaming Commission		43 MoReg 688R		
11 CSR 45-4.210	Missouri Gaming Commission		43 MoReg 1157		
11 CSR 45-4.260	Missouri Gaming Commission		43 MoReg 1157		
11 CSR 45-4.380	Missouri Gaming Commission		43 MoReg 1158		
11 CSR 45-4.430	Missouri Gaming Commission		43 MoReg 49R	43 MoReg 1184R	
11 CSR 45-5.020	Missouri Gaming Commission		43 MoReg 49R	43 MoReg 1184R	
11 CSR 45-5.053	Missouri Gaming Commission		41 MoReg 1543		
			43 MoReg 688		
11 CSR 45-5.065	Missouri Gaming Commission		43 MoReg 1158		
11 CSR 45-5.170	Missouri Gaming Commission		43 MoReg 689		
11 CSR 45-5.181	Missouri Gaming Commission		43 MoReg 1158		
11 CSR 45-5.184	Missouri Gaming Commission		43 MoReg 1159		
11 CSR 45-5.250	Missouri Gaming Commission		43 MoReg 49R	43 MoReg 1184R	
11 CSR 45-5.260	Missouri Gaming Commission		43 MoReg 1159		
11 CSR 45-5.280	Missouri Gaming Commission		43 MoReg 49R	43 MoReg 1184R	
11 CSR 45-5.400	Missouri Gaming Commission		43 MoReg 50R	43 MoReg 1184R	
11 CSR 45-5.410	Missouri Gaming Commission		43 MoReg 50R	43 MoReg 1184R	
11 CSR 45-5.420	Missouri Gaming Commission		43 MoReg 50R	43 MoReg 1185R	
11 CSR 45-6.010	Missouri Gaming Commission		43 MoReg 1160		
11 CSR 45-6.020	Missouri Gaming Commission		43 MoReg 1160		
11 CSR 45-6.025	Missouri Gaming Commission		43 MoReg 1162		
11 CSR 45-6.030	Missouri Gaming Commission		43 MoReg 1163		
11 CSR 45-6.050	Missouri Gaming Commission		43 MoReg 50R	43 MoReg 1185R	
11 CSR 45-6.060	Missouri Gaming Commission		43 MoReg 51R	43 MoReg 1185R	
11 CSR 45-7.020	Missouri Gaming Commission		43 MoReg 689		

Rule Number	Agency	Emergency	Proposed	Order	In Addition
II CSR 45-7.070	Missouri Gaming Commission		43 MoReg 690		
II CSR 45-7.090	Missouri Gaming Commission		43 MoReg 1448R		
II CSR 45-7.100	Missouri Gaming Commission		43 MoReg 690		
II CSR 45-7.140	Missouri Gaming Commission		43 MoReg 51R	43 MoReg 1185R	
II CSR 45-7.150	Missouri Gaming Commission		43 MoReg 690		
II CSR 45-7.160	Missouri Gaming Commission		43 MoReg 1163		
II CSR 45-8.050	Missouri Gaming Commission		43 MoReg 1164		
II CSR 45-8.060	Missouri Gaming Commission		43 MoReg 1164		
II CSR 45-8.090	Missouri Gaming Commission		43 MoReg 1165		
II CSR 45-8.100	Missouri Gaming Commission		43 MoReg 691		
II CSR 45-8.130	Missouri Gaming Commission		43 MoReg 1165		
II CSR 45-8.150	Missouri Gaming Commission		43 MoReg 1165		
II CSR 45-8.160	Missouri Gaming Commission		43 MoReg 51R	43 MoReg 1185R	
II CSR 45-9.010	Missouri Gaming Commission		43 MoReg 691		
II CSR 45-9.040	Missouri Gaming Commission		43 MoReg 691		
II CSR 45-9.101	Missouri Gaming Commission		43 MoReg 1166		
II CSR 45-9.120	Missouri Gaming Commission		43 MoReg 1166		
II CSR 45-10.020	Missouri Gaming Commission		43 MoReg 1449		
II CSR 45-10.055	Missouri Gaming Commission		43 MoReg 692		
II CSR 45-10.070	Missouri Gaming Commission		43 MoReg 52R	43 MoReg 1186R	
II CSR 45-10.080	Missouri Gaming Commission		43 MoReg 52R	43 MoReg 1186R	
II CSR 45-10.115	Missouri Gaming Commission		43 MoReg 52R	43 MoReg 1186R	
II CSR 45-11.020	Missouri Gaming Commission		43 MoReg 693		
II CSR 45-11.030	Missouri Gaming Commission		43 MoReg 693		
II CSR 45-11.070	Missouri Gaming Commission		43 MoReg 694		
II CSR 45-11.080	Missouri Gaming Commission		43 MoReg 694		
II CSR 45-11.120	Missouri Gaming Commission		43 MoReg 695		
II CSR 45-11.130	Missouri Gaming Commission		43 MoReg 695		
II CSR 45-11.160	Missouri Gaming Commission		43 MoReg 695R		
II CSR 45-11.170	Missouri Gaming Commission		43 MoReg 52R	43 MoReg 1186R	
II CSR 45-11.180	Missouri Gaming Commission		43 MoReg 53R	43 MoReg 1186R	
II CSR 45-12.020	Missouri Gaming Commission		43 MoReg 696		
II CSR 45-14.010	Missouri Gaming Commission		43 MoReg 53R	43 MoReg 1186R	
II CSR 45-14.020	Missouri Gaming Commission		43 MoReg 53R	43 MoReg 1187R	
II CSR 45-14.030	Missouri Gaming Commission		43 MoReg 53R	43 MoReg 1187R	
II CSR 45-14.040	Missouri Gaming Commission		43 MoReg 54R	43 MoReg 1187R	
II CSR 45-14.050	Missouri Gaming Commission		43 MoReg 54R	43 MoReg 1187R	
II CSR 45-16.010	Missouri Gaming Commission		43 MoReg 54R	43 MoReg 1187R	
II CSR 45-16.020	Missouri Gaming Commission		43 MoReg 55R	43 MoReg 1188R	
II CSR 45-16.030	Missouri Gaming Commission		43 MoReg 55R	43 MoReg 1188R	
II CSR 45-16.040	Missouri Gaming Commission		43 MoReg 55R	43 MoReg 1188R	
II CSR 45-16.050	Missouri Gaming Commission		43 MoReg 55R	43 MoReg 1188R	
II CSR 45-16.060	Missouri Gaming Commission		43 MoReg 56R	43 MoReg 1188R	
II CSR 45-16.070	Missouri Gaming Commission		43 MoReg 56R	43 MoReg 1188R	
II CSR 45-16.080	Missouri Gaming Commission		43 MoReg 56R	43 MoReg 1189R	
II CSR 45-16.090	Missouri Gaming Commission		43 MoReg 56R	43 MoReg 1189R	
II CSR 45-17.010	Missouri Gaming Commission		43 MoReg 696		
II CSR 45-17.020	Missouri Gaming Commission		43 MoReg 697		
II CSR 45-30.065	Missouri Gaming Commission		43 MoReg 1167		
II CSR 45-30.480	Missouri Gaming Commission		43 MoReg 1167		
II CSR 45-30.500	Missouri Gaming Commission		43 MoReg 57R	43 MoReg 1189R	
II CSR 45-30.520	Missouri Gaming Commission		43 MoReg 697R		
II CSR 45-30.523	Missouri Gaming Commission		43 MoReg 1167		
II CSR 45-30.535	Missouri Gaming Commission		43 MoReg 697		
II CSR 45-30.555	Missouri Gaming Commission		43 MoReg 1167		
II CSR 45-31.005	Missouri Gaming Commission		43 MoReg 57R	43 MoReg 1189R	
II CSR 45-40.060	Missouri Gaming Commission		43 MoReg 1449		
II CSR 45-40.070	Missouri Gaming Commission		43 MoReg 698		
II CSR 45-40.100	Missouri Gaming Commission		43 MoReg 698		
II CSR 45-60.010	Missouri Gaming Commission		43 MoReg 57R	43 MoReg 1189R	
II CSR 45-60.020	Missouri Gaming Commission		43 MoReg 58R	43 MoReg 1189R	
II CSR 45-60.025	Missouri Gaming Commission		43 MoReg 58R	43 MoReg 1190R	
II CSR 45-60.030	Missouri Gaming Commission		43 MoReg 58R	43 MoReg 1190R	
II CSR 45-60.040	Missouri Gaming Commission		43 MoReg 58R	43 MoReg 1190R	
II CSR 45-60.050	Missouri Gaming Commission		43 MoReg 59R	43 MoReg 1190R	
II CSR 45-60.055	Missouri Gaming Commission		43 MoReg 59R	43 MoReg 1190R	
II CSR 45-60.060	Missouri Gaming Commission		43 MoReg 59R	43 MoReg 1191R	
II CSR 45-61.010	Missouri Gaming Commission		43 MoReg 60R	43 MoReg 1191R	
II CSR 45-61.015	Missouri Gaming Commission		43 MoReg 60R	43 MoReg 1191R	
II CSR 45-61.020	Missouri Gaming Commission		43 MoReg 60R	43 MoReg 1191R	
II CSR 45-61.021	Missouri Gaming Commission		43 MoReg 60R	43 MoReg 1191R	
II CSR 45-61.022	Missouri Gaming Commission		43 MoReg 61R	43 MoReg 1191R	
II CSR 45-61.023	Missouri Gaming Commission		43 MoReg 61R	43 MoReg 1192R	
II CSR 45-61.024	Missouri Gaming Commission		43 MoReg 61R	43 MoReg 1192R	
II CSR 45-61.025	Missouri Gaming Commission		43 MoReg 62R	43 MoReg 1192R	
II CSR 45-61.026	Missouri Gaming Commission		43 MoReg 62R	43 MoReg 1192R	
II CSR 45-61.027	Missouri Gaming Commission		43 MoReg 62R	43 MoReg 1192R	
II CSR 45-61.028	Missouri Gaming Commission		43 MoReg 62R	43 MoReg 1193R	
II CSR 45-61.029	Missouri Gaming Commission		43 MoReg 63R	43 MoReg 1193R	
II CSR 45-61.030	Missouri Gaming Commission		43 MoReg 63R	43 MoReg 1193R	
II CSR 45-62.010	Missouri Gaming Commission		43 MoReg 63R	43 MoReg 1193R	
II CSR 45-62.020	Missouri Gaming Commission		43 MoReg 64R	43 MoReg 1193R	
II CSR 45-62.030	Missouri Gaming Commission		43 MoReg 64R	43 MoReg 1193R	
II CSR 45-62.035	Missouri Gaming Commission		43 MoReg 64R	43 MoReg 1194R	
II CSR 45-62.040	Missouri Gaming Commission		43 MoReg 64R	43 MoReg 1194R	
II CSR 45-62.050	Missouri Gaming Commission		43 MoReg 65R	43 MoReg 1194R	
II CSR 45-62.055	Missouri Gaming Commission		43 MoReg 65R	43 MoReg 1194R	
II CSR 45-62.060	Missouri Gaming Commission		43 MoReg 65R	43 MoReg 1194R	
II CSR 45-62.070	Missouri Gaming Commission		43 MoReg 66R	43 MoReg 1195R	
II CSR 45-62.080	Missouri Gaming Commission		43 MoReg 66R	43 MoReg 1195R	
II CSR 45-62.090	Missouri Gaming Commission		43 MoReg 66R	43 MoReg 1195R	

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DEPARTMENT OF SOCIAL SERVICES
Department of Social Services

Rule Number	Agency	Emergency	Proposed	Order	In Addition
13 CSR 10-1.015	Division of Finance and Administrative Services		43 MoReg 276R	43 MoReg 1487R	
13 CSR 30-2.030	Child Support Enforcement		43 MoReg 1168R		
13 CSR 30-2.040	Child Support Enforcement		43 MoReg 1168R		
13 CSR 35-32.040	Children's Division		43 MoReg 276R	43 MoReg 1487R	
13 CSR 35-73.017	Children's Division (<i>Changed from 13 CSR 40-73.017</i>)				43 MoReg 1944
13 CSR 35-73.020	Children's Division (<i>Changed from 13 CSR 40-73.020</i>)				43 MoReg 1944
13 CSR 35-73.055	Children's Division (<i>Changed from 13 CSR 40-73.055</i>)				43 MoReg 1944
13 CSR 40-2.220	Family Support Division		43 MoReg 276R	43 MoReg 1487R	
13 CSR 40-2.280	Family Support Division		43 MoReg 277R	43 MoReg 1487R	
13 CSR 40-2.290	Family Support Division		43 MoReg 277R	43 MoReg 1487R	
13 CSR 40-7.015	Family Support Division		43 MoReg 1169		
13 CSR 40-34.012	Family Support Division		43 MoReg 1917R		
13 CSR 40-59.020	Family Support Division		43 MoReg 277R	43 MoReg 1488R	
13 CSR 40-59.030	Family Support Division		43 MoReg 277R	43 MoReg 1488R	
13 CSR 40-59.040	Family Support Division		43 MoReg 698R		
13 CSR 40-59.050	Family Support Division		43 MoReg 698R		
13 CSR 40-61.065	Family Support Division		43 MoReg 699R		
13 CSR 40-61.075	Family Support Division		43 MoReg 778R		
13 CSR 40-62.062	Family Support Division		43 MoReg 778R		
13 CSR 40-62.072	Family Support Division		43 MoReg 778R		
13 CSR 40-73.017	Family Support Division (<i>Changed to 13 CSR 35-73.017</i>)				43 MoReg 1944
13 CSR 40-73.020	Family Support Division (<i>Changed to 13 CSR 35-73.020</i>)				43 MoReg 1944
13 CSR 40-73.055	Family Support Division (<i>Changed to 13 CSR 35-73.055</i>)				43 MoReg 1944
13 CSR 70-3.040	MO HealthNet Division		43 MoReg 1169R		
13 CSR 70-3.190	MO HealthNet Division		43 MoReg 1917R		
13 CSR 70-4.070	MO HealthNet Division		43 MoReg 1918R		
13 CSR 70-10.050	MO HealthNet Division		43 MoReg 278R	43 MoReg 1488R	
13 CSR 70-15.010	MO HealthNet Division	This Issue	This Issue		
13 CSR 70-15.110	MO HealthNet Division	This Issue	This Issue		
13 CSR 70-15.150	MO HealthNet Division		43 MoReg 779R		
13 CSR 70-15.160	MO HealthNet Division		43 MoReg 1170		
13 CSR 70-20.010	MO HealthNet Division		43 MoReg 779R		
13 CSR 70-20.032	MO HealthNet Division		43 MoReg 1918R		
13 CSR 70-20.033	MO HealthNet Division		43 MoReg 779R		
13 CSR 70-20.040	MO HealthNet Division		43 MoReg 1918R		
13 CSR 70-20.045	MO HealthNet Division		43 MoReg 1176		
13 CSR 70-20.050	MO HealthNet Division		43 MoReg 1176		
13 CSR 70-20.071	MO HealthNet Division		43 MoReg 779R		
13 CSR 70-25.120	MO HealthNet Division		43 MoReg 780R		
13 CSR 70-93.010	MO HealthNet Division		43 MoReg 278R	43 MoReg 1488R	
13 CSR 70-93.020	MO HealthNet Division		43 MoReg 278R	43 MoReg 1488R	
13 CSR 110-2.030	Division of Youth Services		43 MoReg 1177		
13 CSR 110-2.040	Division of Youth Services		43 MoReg 1177		
13 CSR 110-2.050	Division of Youth Services		43 MoReg 1178		
13 CSR 110-2.080	Division of Youth Services		43 MoReg 1179		
13 CSR 110-2.100	Division of Youth Services		43 MoReg 1179		
13 CSR 110-2.110	Division of Youth Services		43 MoReg 278R	43 MoReg 1488R	
13 CSR 110-2.130	Division of Youth Services		43 MoReg 1180		
13 CSR 110-4.010	Division of Youth Services		43 MoReg 279R	43 MoReg 1489R	
13 CSR 110-6.010	Division of Youth Services		43 MoReg 279R	43 MoReg 1489R	
DEPARTMENT OF CORRECTIONS					
14 CSR	Department of Corrections				42 MoReg 990
ELECTED OFFICIALS					
15 CSR	Elected Officials				43 MoReg 1498
15 CSR 30-51.030	Secretary of State		43 MoReg 1056		
15 CSR 30-54.100	Secretary of State		43 MoReg 1057		
15 CSR 30-54.210	Secretary of State		43 MoReg 1057		
15 CSR 30-54.260	Secretary of State		43 MoReg 1058		
15 CSR 40-3.125	State Auditor		43 MoReg 410	43 MoReg 1359	
15 CSR 40-3.135	State Auditor		43 MoReg 441	43 MoReg 1375	
RETIREMENT SYSTEMS					
16 CSR	Retirement Systems				43 MoReg 1498
16 CSR 20-1.010	Missouri Local Government Employees' Retirement System (LAGERS)				43 MoReg 1215
16 CSR 20-2.115	Missouri Local Government Employees' Retirement System (LAGERS)		43 MoReg 1181		
16 CSR 50-2.010	The County Employees' Retirement Fund		42 MoReg 1591	43 MoReg 293	
16 CSR 50-2.030	The County Employees' Retirement Fund		42 MoReg 1592	43 MoReg 293	
BOARD OF POLICE COMMISSIONERS					
17 CSR	Board of Police Commissioners				43 MoReg 1498
PUBLIC DEFENDER COMMISSION					
18 CSR	Public Defender Commission				43 MoReg 1498
DEPARTMENT OF HEALTH AND SENIOR SERVICES					
19 CSR	Department of Health and Senior Services				43 MoReg 1498
19 CSR 10-10	Office of the Director				42 MoReg 991
19 CSR 15-3.010	Division of Senior and Disability Services		43 MoReg 279R	43 MoReg 1939R	
19 CSR 15-3.020	Division of Senior and Disability Services		43 MoReg 279R	43 MoReg 1939R	
19 CSR 15-3.030	Division of Senior and Disability Services		43 MoReg 280R	43 MoReg 1939R	
19 CSR 15-3.040	Division of Senior and Disability Services		43 MoReg 280R	43 MoReg 1939R	

Rule Number	Agency	Emergency	Proposed	Order	In Addition
19 CSR 15-3.050	Division of Senior and Disability Services		43 MoReg 280R	43 MoReg 1939R	
19 CSR 15-4.030	Division of Senior and Disability Services		43 MoReg 280R	43 MoReg 1939R	
19 CSR 15-4.310	Division of Senior and Disability Services		43 MoReg 281R	43 MoReg 1940R	
19 CSR 30-40.420	Division of Regulation and Licensure	43 MoReg 509	43 MoReg 546	43 MoReg 1940	
19 CSR 30-40.750	Division of Regulation and Licensure	43 MoReg 513	43 MoReg 551	43 MoReg 1940	
19 CSR 30-70.200	Division of Regulation and Licensure		43 MoReg 281R	43 MoReg 1940R	
19 CSR 40-10.010	Division of Maternal, Child and Family Health		43 MoReg 281R	43 MoReg 1940R	
19 CSR 50-3.010	Division of Injury Prevention, Head Injury Rehabilitation and Local Health Services		43 MoReg 282R	43 MoReg 1940R	
19 CSR 50-10.010	Division of Injury Prevention, Head Injury Rehabilitation and Local Health Services		43 MoReg 282R	43 MoReg 1941R	
19 CSR 50-10.020	Division of Injury Prevention, Head Injury Rehabilitation and Local Health Services		43 MoReg 282R	43 MoReg 1941R	
19 CSR 60-50	Missouri Health Facilities Review Committee				43 MoReg 1215 43 MoReg 1500 43 MoReg 1944
19 CSR 90-1.010	Missouri Senior Rx Program		43 MoReg 282R	43 MoReg 1941R	
19 CSR 90-1.020	Missouri Senior Rx Program		43 MoReg 283R	43 MoReg 1941R	
19 CSR 90-1.030	Missouri Senior Rx Program		43 MoReg 283R	43 MoReg 1941R	
19 CSR 90-1.040	Missouri Senior Rx Program		43 MoReg 283R	43 MoReg 1942R	
19 CSR 90-1.050	Missouri Senior Rx Program		43 MoReg 283R	43 MoReg 1942R	
19 CSR 90-1.060	Missouri Senior Rx Program		43 MoReg 284R	43 MoReg 1942R	
19 CSR 90-1.070	Missouri Senior Rx Program		43 MoReg 284R	43 MoReg 1942R	
19 CSR 90-1.080	Missouri Senior Rx Program		43 MoReg 284R	43 MoReg 1942R	
19 CSR 90-1.090	Missouri Senior Rx Program		43 MoReg 285R	43 MoReg 1942R	
19 CSR 90-2.010	Missouri Senior Rx Program		43 MoReg 285R	43 MoReg 1943R	
19 CSR 90-2.020	Missouri Senior Rx Program		43 MoReg 285R	43 MoReg 1943R	
19 CSR 90-2.030	Missouri Senior Rx Program		43 MoReg 285R	43 MoReg 1943R	
19 CSR 90-2.040	Missouri Senior Rx Program		43 MoReg 286R	43 MoReg 1943R	
19 CSR 90-2.050	Missouri Senior Rx Program		43 MoReg 286R	43 MoReg 1943R	
DEPARTMENT OF INSURANCE, FINANCIAL INSTITUTIONS AND PROFESSIONAL REGISTRATION					
20 CSR	Applied Behavior Analysis Maximum Benefit				43 MoReg 477
20 CSR	Caps for Medical Malpractice				43 MoReg 1376
20 CSR	Construction Claims Binding Arbitration Cap				42 MoReg 1851
20 CSR	Sovereign Immunity Limits				42 MoReg 1851
20 CSR	State Legal Expense Fund Cap				42 MoReg 1851
20 CSR 2015-1.010	Acupuncturist Advisory Committee		43 MoReg 1450		
20 CSR 2015-1.020	Acupuncturist Advisory Committee		43 MoReg 1451		
20 CSR 2015-1.030	Acupuncturist Advisory Committee		43 MoReg 1452		
20 CSR 2015-2.010	Acupuncturist Advisory Committee		43 MoReg 1455		
20 CSR 2015-2.020	Acupuncturist Advisory Committee		43 MoReg 1455		
20 CSR 2015-3.010	Acupuncturist Advisory Committee		43 MoReg 1456		
20 CSR 2015-3.020	Acupuncturist Advisory Committee		43 MoReg 1456		
20 CSR 2015-4.010	Acupuncturist Advisory Committee		43 MoReg 1457		
20 CSR 2015-4.020	Acupuncturist Advisory Committee		43 MoReg 1458		
20 CSR 2030-1.020	Missouri Board for Architects, Professional Engineers, Professional Land Surveyors, and Professional Landscape Architects		43 MoReg 888		
20 CSR 2030-1.030	Missouri Board for Architects, Professional Engineers, Professional Land Surveyors, and Professional Landscape Architects		43 MoReg 892		
20 CSR 2030-2.010	Missouri Board for Architects, Professional Engineers, Professional Land Surveyors, and Professional Landscape Architects		43 MoReg 894		
20 CSR 2030-2.040	Missouri Board for Architects, Professional Engineers, Professional Land Surveyors, and Professional Landscape Architects		43 MoReg 895		
20 CSR 2030-3.060	Missouri Board for Architects, Professional Engineers, Professional Land Surveyors, and Professional Landscape Architects		43 MoReg 895		
20 CSR 2030-4.010	Missouri Board for Architects, Professional Engineers, Professional Land Surveyors, and Professional Landscape Architects		43 MoReg 1458		
20 CSR 2030-4.050	Missouri Board for Architects, Professional Engineers, Professional Land Surveyors, and Professional Landscape Architects		43 MoReg 896		
20 CSR 2030-4.055	Missouri Board for Architects, Professional Engineers, Professional Land Surveyors, and Professional Landscape Architects		43 MoReg 897		
20 CSR 2030-4.060	Missouri Board for Architects, Professional Engineers, Professional Land Surveyors, and Professional Landscape Architects		43 MoReg 897		
20 CSR 2030-4.070	Missouri Board for Architects, Professional Engineers, Professional Land Surveyors, and Professional Landscape Architects		43 MoReg 898		
20 CSR 2030-4.080	Missouri Board for Architects, Professional Engineers, Professional Land Surveyors, and Professional Landscape Architects		43 MoReg 898		
20 CSR 2030-4.090	Missouri Board for Architects, Professional Engineers, Professional Land Surveyors, and Professional Landscape Architects		43 MoReg 899		
20 CSR 2030-5.010	Missouri Board for Architects, Professional Engineers, Professional Land Surveyors, and Professional Landscape Architects		43 MoReg 1458		
20 CSR 2030-5.030	Missouri Board for Architects, Professional Engineers, Professional Land Surveyors, and Professional Landscape Architects		43 MoReg 1459		
20 CSR 2030-5.055	Missouri Board for Architects, Professional Engineers, Professional Land Surveyors, and Professional Landscape Architects		43 MoReg 1460		

Rule Number	Agency	Emergency	Proposed	Order	In Addition
20 CSR 2030-5.080	Missouri Board for Architects, Professional Engineers, Professional Land Surveyors, and Professional Landscape Architects		43 MoReg 1460		
20 CSR 2030-5.090					
20 CSR 2030-5.100					
20 CSR 2030-5.105					
20 CSR 2030-5.110					
20 CSR 2030-5.130					
20 CSR 2030-5.140					
20 CSR 2030-5.160					
20 CSR 2030-6.015					
20 CSR 2030-6.020					
20 CSR 2030-8.020					
20 CSR 2030-10.010					
20 CSR 2030-11.010					
20 CSR 2030-11.015					
20 CSR 2030-11.020					
20 CSR 2030-11.025					
20 CSR 2030-11.030					
20 CSR 2030-11.035					
20 CSR 2030-12.010					
20 CSR 2030-13.010					
20 CSR 2030-13.020					
20 CSR 2030-14.020					
20 CSR 2030-14.030					
20 CSR 2030-14.040					
20 CSR 2030-15.020					
20 CSR 2030-21.010					
20 CSR 2030-21.020					
20 CSR 2040-1.021	Office of Athletics		43 MoReg 1473		
20 CSR 2040-2.011	Office of Athletics		43 MoReg 912		
20 CSR 2040-2.021	Office of Athletics		43 MoReg 913		
20 CSR 2040-3.011	Office of Athletics		43 MoReg 913		
20 CSR 2040-3.030	Office of Athletics		43 MoReg 914		
20 CSR 2040-4.015	Office of Athletics		43 MoReg 914		
20 CSR 2040-4.020	Office of Athletics		43 MoReg 915		
20 CSR 2040-4.030	Office of Athletics		43 MoReg 915		
20 CSR 2040-4.040	Office of Athletics		43 MoReg 916		
20 CSR 2040-4.050	Office of Athletics		43 MoReg 917		

Rule Number	Agency	Emergency	Proposed	Order	In Addition
20 CSR 2040-4.060	Office of Athletics		43 MoReg 917		
20 CSR 2040-4.070	Office of Athletics		43 MoReg 917		
20 CSR 2040-4.080	Office of Athletics		43 MoReg 918		
20 CSR 2040-4.090	Office of Athletics		43 MoReg 918		
20 CSR 2040-5.010	Office of Athletics		43 MoReg 919		
20 CSR 2040-5.030	Office of Athletics		43 MoReg 920		
20 CSR 2040-5.040	Office of Athletics		43 MoReg 921		
20 CSR 2040-5.060	Office of Athletics		43 MoReg 922		
20 CSR 2040-6.010	Office of Athletics		43 MoReg 923		
20 CSR 2040-7.010	Office of Athletics		43 MoReg 923		
20 CSR 2040-8.020	Office of Athletics		43 MoReg 923		
20 CSR 2040-8.030	Office of Athletics		43 MoReg 924		
20 CSR 2040-8.040	Office of Athletics		43 MoReg 924		
20 CSR 2040-8.050	Office of Athletics		43 MoReg 925		
20 CSR 2040-8.060	Office of Athletics		43 MoReg 926		
20 CSR 2040-8.070	Office of Athletics		43 MoReg 926		
20 CSR 2040-8.080	Office of Athletics		43 MoReg 927		
20 CSR 2040-8.090	Office of Athletics		43 MoReg 927		
20 CSR 2040-8.100	Office of Athletics		43 MoReg 927		
20 CSR 2040-8.110	Office of Athletics		43 MoReg 928		
20 CSR 2040-8.120	Office of Athletics		43 MoReg 928		
20 CSR 2040-8.130	Office of Athletics		43 MoReg 929		
20 CSR 2040-8.140	Office of Athletics		43 MoReg 929		
20 CSR 2040-8.150	Office of Athletics		43 MoReg 931		
20 CSR 2040-8.160	Office of Athletics		43 MoReg 931		
20 CSR 2040-8.170	Office of Athletics		43 MoReg 932		
20 CSR 2040-8.180	Office of Athletics		43 MoReg 932		
20 CSR 2040-8.190	Office of Athletics		43 MoReg 933		
20 CSR 2065-1.020	Endowed Care Cemeteries		43 MoReg 1332R		
20 CSR 2065-1.030	Endowed Care Cemeteries		43 MoReg 1333		
20 CSR 2065-1.050	Endowed Care Cemeteries		43 MoReg 1333		
20 CSR 2065-1.060	Endowed Care Cemeteries		43 MoReg 1333		
20 CSR 2065-2.010	Endowed Care Cemeteries		43 MoReg 1334		
20 CSR 2065-2.020	Endowed Care Cemeteries		43 MoReg 1334		
20 CSR 2065-2.050	Endowed Care Cemeteries		43 MoReg 1335		
20 CSR 2085-14.010	Board of Cosmetology and Barber Examiners		43 MoReg 780R	This IssueR	
20 CSR 2085-14.020	Board of Cosmetology and Barber Examiners		43 MoReg 780R	This IssueR	
20 CSR 2110-2.110	Missouri Dental Board		43 MoReg 10R	43 MoReg 1207R	
20 CSR 2110-2.111	Missouri Dental Board		43 MoReg 10R	43 MoReg 1212R	
20 CSR 2110-2.140	Missouri Dental Board		43 MoReg 11R	43 MoReg 1213R	
20 CSR 2110-2.150	Missouri Dental Board		43 MoReg 11R	43 MoReg 1214R	
20 CSR 2110-2.170	Missouri Dental Board		43 MoReg 555	43 MoReg 1489	
20 CSR 2115-1.010	State Committee of Dietitians		43 MoReg 1335		
20 CSR 2115-1.030	State Committee of Dietitians		43 MoReg 1335		
20 CSR 2115-2.010	State Committee of Dietitians		43 MoReg 1336		
20 CSR 2115-2.020	State Committee of Dietitians		43 MoReg 1336		
20 CSR 2115-2.030	State Committee of Dietitians		43 MoReg 1337		
20 CSR 2115-2.040	State Committee of Dietitians		43 MoReg 1337		
20 CSR 2150-5.100	State Board of Registration for the Healing Arts	43 MoReg 977	43 MoReg 1058		
20 CSR 2200-2.001	State Board of Nursing		43 MoReg 558	43 MoReg 1489	
20 CSR 2200-2.010	State Board of Nursing		43 MoReg 559	43 MoReg 1489	
20 CSR 2200-2.020	State Board of Nursing		43 MoReg 561	43 MoReg 1490	
20 CSR 2200-2.030	State Board of Nursing		43 MoReg 561	43 MoReg 1490	
20 CSR 2200-2.035	State Board of Nursing		43 MoReg 561	43 MoReg 1490	
20 CSR 2200-2.040	State Board of Nursing		43 MoReg 562	43 MoReg 1490	
20 CSR 2200-2.050	State Board of Nursing		43 MoReg 562	43 MoReg 1490	
20 CSR 2200-2.060	State Board of Nursing		43 MoReg 562	43 MoReg 1490	
20 CSR 2200-2.070	State Board of Nursing		43 MoReg 563	43 MoReg 1491	
20 CSR 2200-2.080	State Board of Nursing		43 MoReg 563	43 MoReg 1491	
20 CSR 2200-2.085	State Board of Nursing		43 MoReg 564	43 MoReg 1491	
20 CSR 2200-2.090	State Board of Nursing		43 MoReg 564	43 MoReg 1491	
20 CSR 2200-2.100	State Board of Nursing		43 MoReg 565	43 MoReg 1491	
20 CSR 2200-2.110	State Board of Nursing		43 MoReg 566	43 MoReg 1492	
20 CSR 2200-2.120	State Board of Nursing		43 MoReg 566	43 MoReg 1492	
20 CSR 2200-2.130	State Board of Nursing		43 MoReg 567	43 MoReg 1492	
20 CSR 2200-2.180	State Board of Nursing		43 MoReg 567	43 MoReg 1492	
20 CSR 2200-3.001	State Board of Nursing		43 MoReg 568	43 MoReg 1492	
20 CSR 2200-3.010	State Board of Nursing		43 MoReg 569	43 MoReg 1492	
20 CSR 2200-3.020	State Board of Nursing		43 MoReg 571	43 MoReg 1493	
20 CSR 2200-3.030	State Board of Nursing		43 MoReg 572	43 MoReg 1493	
20 CSR 2200-3.035	State Board of Nursing		43 MoReg 572	43 MoReg 1493	
20 CSR 2200-3.040	State Board of Nursing		43 MoReg 572	43 MoReg 1493	
20 CSR 2200-3.050	State Board of Nursing		43 MoReg 573	43 MoReg 1493	
20 CSR 2200-3.060	State Board of Nursing		43 MoReg 573	43 MoReg 1494	
20 CSR 2200-3.070	State Board of Nursing		43 MoReg 574	43 MoReg 1494	
20 CSR 2200-3.080	State Board of Nursing		43 MoReg 574	43 MoReg 1494	
20 CSR 2200-3.085	State Board of Nursing		43 MoReg 575	43 MoReg 1494	
20 CSR 2200-3.090	State Board of Nursing		43 MoReg 575	43 MoReg 1494	
20 CSR 2200-3.100	State Board of Nursing		43 MoReg 575	43 MoReg 1494	
20 CSR 2200-3.110	State Board of Nursing		43 MoReg 577	43 MoReg 1495	
20 CSR 2200-3.120	State Board of Nursing		43 MoReg 577	43 MoReg 1495	
20 CSR 2200-3.130	State Board of Nursing		43 MoReg 577	43 MoReg 1495	
20 CSR 2200-3.180	State Board of Nursing		43 MoReg 578	43 MoReg 1495	
20 CSR 2200-4.020	State Board of Nursing		This Issue		
20 CSR 2200-4.030	State Board of Nursing		This Issue		
20 CSR 2200-4.040	State Board of Nursing		This Issue		
20 CSR 2200-4.100	State Board of Nursing		This Issue		
20 CSR 2200-4.200	State Board of Nursing	43 MoReg 977	43 MoReg 1059		
20 CSR 2200-5.010	State Board of Nursing		43 MoReg 1338R		
20 CSR 2200-8.001	State Board of Nursing		43 MoReg 579	43 MoReg 1495	

Rule Number	Agency	Emergency	Proposed	Order	In Addition
20 CSR 2200-8.010	State Board of Nursing		43 MoReg 579	43 MoReg 1496	
20 CSR 2200-8.020	State Board of Nursing		43 MoReg 581	43 MoReg 1496	
20 CSR 2200-8.030	State Board of Nursing		43 MoReg 581	43 MoReg 1496	
20 CSR 2200-8.035	State Board of Nursing		43 MoReg 582	43 MoReg 1496	
20 CSR 2200-8.050	State Board of Nursing		43 MoReg 582	43 MoReg 1496	
20 CSR 2200-8.080	State Board of Nursing		43 MoReg 582	43 MoReg 1496	
20 CSR 2200-8.085	State Board of Nursing		43 MoReg 583	43 MoReg 1497	
20 CSR 2200-8.100	State Board of Nursing		43 MoReg 583	43 MoReg 1497	
20 CSR 2210-2.070	State Board of Optometry	43 MoReg 1257	43 MoReg 1338		
20 CSR 2220-4.010	State Board of Pharmacy	43 MoReg 663	43 MoReg 699	43 MoReg 1943	
20 CSR 2220-6.050	State Board of Pharmacy		43 MoReg 583		
20 CSR 2231-2.010	Division of Professional Registration		43 MoReg 1341		
20 CSR 2245-1.010	Real Estate Appraisers		43 MoReg 1059		
20 CSR 2245-2.010	Real Estate Appraisers		43 MoReg 1060		
20 CSR 2245-2.030	Real Estate Appraisers		43 MoReg 1061		
20 CSR 2245-5.020	Real Estate Appraisers	43 MoReg 737	43 MoReg 780	This Issue	
20 CSR 2255-1.010	Missouri Board for Respiratory Care		43 MoReg 784	This Issue	
20 CSR 2255-1.020	Missouri Board for Respiratory Care		43 MoReg 784	This Issue	
20 CSR 2255-4.010	Missouri Board for Respiratory Care		43 MoReg 784	This Issue	
20 CSR 2267-2.020	Office of Tattooing, Body Piercing, and Branding		43 MoReg 785	This Issue	

Emergency Rule Table

Agency	Publication	Effective	Expiration
Office of Administration			
Missouri Ethics Commission			
1 CSR 50-5.010	Definitions . . . . .	.43 MoReg 1121Aug. 8, 2018	Feb. 4, 2019
1 CSR 50-5.020	Registration Requirements for Committees Domiciled Outside the State of Missouri and Out-of-State Committees . . . . .	.43 MoReg 1121Aug. 8, 2018	Feb. 4, 2019
Department of Agriculture			
Animal Health			
2 CSR 30-10.010	Inspection of Meat and Poultry . . . . .	.43 MoReg 385Feb. 9, 2018	Aug. 7, 2018
Department of Social Services			
Division of Finance and Administrative Services			
13 CSR 10-4.010	Prohibition Against Expenditure of Appropriated Funds for Abortion Facilities . . . . .	.Next IssueJuly 15, 2018	Feb. 28, 2019
MO HealthNet Division			
13 CSR 70-15.010	Inpatient Hospital Services Reimbursement Plan; Outpatient Hospital Services Reimbursement Methodology . . . . .	.This IssueJuly 1, 2018	Feb. 28, 2019
13 CSR 70-15.110	Federal Reimbursement Allowance (FRA) . . . . .	.This IssueJuly 1, 2018	Feb. 28, 2019
Department of Health and Senior Services			
Office of the Director			
19 CSR 10-15.060	Prohibition on Expenditure of Funds . . . . .	.Next IssueJuly 15, 2018	Feb. 28, 2019
Division of Regulation and Licensure			
19 CSR 30-40.420	Trauma Center Designation Requirements . . . . .	.43 MoReg 509Feb. 12, 2018	Aug. 10, 2018
19 CSR 30-40.750	ST-Segment Elevation Myocardial Infarction (STEMI) Center Designation Application and Review . . . . .	.43 MoReg 513Feb. 12, 2018	Aug. 10, 2018
Department of Insurance, Financial Institutions and Professional Registration			
State Board of Registration for the Healing Arts			
20 CSR 2150-3.080	Physical Therapists Licensure Fees . . . . .	.Next IssueJuly 13, 2018	Feb. 28, 2019
20 CSR 2150-3.170	Physical Therapist Assistant Licensure Fees . . . . .	.Next IssueJuly 13, 2018	Feb. 28, 2019
20 CSR 2150-3.300	Physical Therapy Compact Rules . . . . .	.Next IssueJuly 13, 2018	Feb. 28, 2019
20 CSR 2150-5.100	Collaborative Practice . . . . .	.43 MoReg 977April 26, 2018	Feb. 5, 2019
State Board of Nursing			
20 CSR 2200-4.200	Collaborative Practice . . . . .	.43 MoReg 977April 26, 2018	Feb. 5, 2019
State Board of Pharmacy			
20 CSR 2220-4.010	General Fees . . . . .	.43 MoReg 663March 30, 2018	Jan. 9, 2019
State Board of Optometry			
20 CSR 2210-2.070	Fees . . . . .	.43 MoReg 1257May 21, 2018	Feb. 28, 2019
Real Estate Appraisers			
20 CSR 2245-5.020	Application, Certificate and License Fees . . . . .	.43 MoReg 737March 15, 2018	Sept. 10, 2018

**Executive
Orders****Subject Matter****Filed Date****Publication****2018**

18-04	Extends the deadline from Section 3d of Executive Order 17-03 through September 30, 2018.	June 29, 2018	This Issue
18-03	Reauthorizes and restructures the Homeland Security Advisory Council.	April 25, 2018	43 MoReg 1123
18-02	Declares a State of Emergency and activates the state militia in response to severe weather that began on Feb. 23.	Feb. 24, 2018	43 MoReg 664
Proclamation	Governor notifies the General Assembly that he is reducing appropriation lines in the fiscal year 2018 budget.	Feb. 14, 2018	43 MoReg 519
18-01	Rescinds Executive Order 07-21.	Jan. 4, 2018	43 MoReg 251

2017

17-24	Designates members of the governor's staff to have supervisory authority over departments, divisions, and agencies of state government.	Nov. 17, 2017	43 MoReg 5
17-23	Advises that state offices will be closed on Friday, November 24, 2017.	Nov. 1, 2017	42 MoReg 1640
17-22	Implements the Emergency Mutual Assistance Compact and activates the state militia to aid the U.S. Virgin Islands in response to Hurricane Maria.	Sept. 20, 2017	42 MoReg 1579
17-21	Governor activates the state militia in anticipation of unrest in the St. Louis region.	Sept. 14, 2017	42 MoReg 1411
17-20	Governor establishes a board of inquiry to review evidence and provide a recommendation on the death sentence for inmate Marcellus Williams.	Aug. 22, 2017	42 MoReg 1361
Proclamation	Governor notifies the General Assembly that he is reducing appropriation lines in the fiscal year 2018 budget and permanently reducing appropriation lines in the fiscal year 2017 budget.	Aug. 1, 2017	42 MoReg 1307
17-19	Directs the Department of Health and Senior Services, the Department of Mental Health, the Department of Public Safety, the Department of Natural Resources, and the Department of Conservation to identify, train, equip, and assess law enforcement and emergency responder efforts to combat Missouri's Opioid Public Health Crisis.	July 18, 2017	42 MoReg 1229
17-18	Directs the Department of Health and Senior Services to create a prescription drug monitoring program.	July 17, 2017	42 MoReg 1143
Amended			
Proclamation	Governor convenes the Second Extra Session of the First Regular Session of the Ninety-Ninth General Assembly regarding abortions facilities.	July 6, 2017	42 MoReg 1139
17-17	Creates the Missouri Justice Reinvest Taskforce to analyze Missouri's corrections system and recommend improvements.	June 28, 2017	42 MoReg 1067
Proclamation	Governor convenes the Second Extra Session of the First Regular Session of the Ninety-Ninth General Assembly regarding abortions facilities.	June 7, 2017	42 MoReg 1024
Proclamation	Governor convenes the First Extra Session of the First Regular Session of the Ninety-Ninth General Assembly regarding attracting new jobs to Missouri.	May 18, 2017	42 MoReg 1022
17-16	Temporarily grants the Director of the Missouri Department of Revenue discretionary authority to adjust certain rules and regulations.	May 11, 2017	42 MoReg 909
17-15	Temporarily grants the Director of the Missouri Department of Health and Senior Services discretionary authority to adjust certain rules and regulations.	May 8, 2017	42 MoReg 907
17-14	Temporarily grants the Director of the Missouri Department of Natural Resources discretionary authority to adjust certain environmental rules and regulations.	May 4, 2017	42 MoReg 905
17-13	Activates the state militia in response to severe weather that began on April 28, 2017.	April 30, 2017	42 MoReg 865
17-12	Declares a State of Emergency and activates the Missouri State Emergency Operations Plan due to severe weather beginning on April 28, 2017.	April 28, 2017	42 MoReg 863
17-11	Establishes the Boards and Commissions Task Force to recommend comprehensive executive and legislative reform proposals to the governor by October 31, 2017.	April 11, 2017	42 MoReg 779
17-10	Designates members of the governor's staff to have supervisory authority over departments, divisions, and agencies of state government.	April 7, 2017	42 MoReg 777

**Executive
Orders**

	Subject Matter	Filed Date	Publication
17-09	Establishes parental leave for state employees of the executive branch of Missouri state government and encourages other state officials to adopt comparable policies.	March 13, 2017	42 MoReg 429
17-08	Declares a State of Emergency and activates the Missouri State Emergency Operations Plan due to severe weather that began on March 6.	March 7, 2017	42 MoReg 427
17-07	Establishes the Governor's Committee for Simple, Fair, and Low Taxes to recommend proposed reforms to the governor by June 30, 2017.	January 25, 2017	42 MoReg 315
17-06	Orders that the Missouri State Emergency Operations Plan be activated. Further orders state agencies to provide assistance to the maximum extent practicable and directs the Adjutant General to call into service such portions of the organized militia as he deems necessary.	January 12, 2017	42 MoReg 267
17-05	Activates the Missouri State Emergency Operation Center due to severe weather expected to begin on Jan. 12, 2017.	January 11, 2017	42 MoReg 266
17-04	Establishes the position of Chief Operating Officer to report directly to the governor and serve as a member of the governor's executive team.	January 11, 2017	42 MoReg 264
17-03	Orders every state agency to immediately suspend all rulemaking until Feb. 28, 2017, and to complete a review of every regulation under its jurisdiction within the <i>Code of State Regulations</i> by May 31, 2018.	January 10, 2017	42 MoReg 261
17-02	Orders state employees of the executive branch of Missouri state government to follow a specified code of conduct regarding ethics during the Greitens administration.	January 9, 2017	42 MoReg 258
17-01	Rescinds Executive Orders 07-10, 88-26, 98-15, and 05-40 regarding the Governor's Advisory Council on Physical Fitness and Health and the Missouri State Park Advisory Board.	January 6, 2017	42 MoReg 257

The rule number and the MoReg publication date follow each entry to this index.

ACUPUNCTURIST ADVISORY COMMITTEE

acupuncturist credentials, name and address changes; 20 CSR 2015-1.020; 7/2/18
application for licensure; 20 CSR 2015-2.010; 7/2/18
code of ethics; 20 CSR 2015-3.020; 7/2/18
complaint handling and disposition; 20 CSR 2015-1.010; 7/2/18
fees; 20 CSR 2015-1.030; 7/2/18
license renewal, restoration and continuing education; 20 CSR 2015-2.020; 7/2/18
standards of practice; 20 CSR 2015-3.010; 7/2/18
supervision of acupuncturist trainees; 20 CSR 2015-4.020; 7/2/18
supervision of auricular detox technicians; 20 CSR 2015-4.010; 7/2/18

ADMINISTRATION, OFFICE OF

state official's salary compensation schedule; 1 CSR 10; 12/15/17

AGRICULTURE, DEPARTMENT OF

administrative services
 general organization; 2 CSR 20-1.010; 7/2/18
 interest defined; 2 CSR 20-3.020; 7/2/18
 nonfarming purposes interpreted; 2 CSR 20-3.030; 7/2/18
 procedure for filing; 2 CSR 20-3.040; 7/2/18
 severability; 2 CSR 20-3.050; 7/2/18
 who shall register; 2 CSR 20-3.010; 7/2/18
ag business development
 general organization; 2 CSR 10-1.010; 6/15/18
animal health
 inspection of meat and poultry; 2 CSR 30-10.010; 3/1/18, 7/16/18
fair
 admissions policy; 2 CSR 50-5.010; 6/15/18
 concession contracts; 2 CSR 50-3.020; 6/15/18
 contracts for professional services; 2 CSR 50-6.020; 6/15/18
 contracts to provide entertainment at the state fair; 2 CSR 50-6.040; 6/15/18
 general organization; 2 CSR 50-1.010; 6/15/18
 hiring procedures for personnel during the state fair; 2 CSR 50-6.010; 6/15/18
 policy and procedure for use of any facility at the state fair during the off-season; 2 CSR 50-7.010; 6/15/18
 registration statement; 2 CSR 50-2.010; 6/15/18
 rental space required to advocate or solicit support for ideas, causes, products, or any of these, while on state fair property; 2 CSR 50-4.010; 6/15/18
 solicitation of sponsors for the state fair; 2 CSR 50-6.030; 6/15/18
grain inspection and warehousing
 acceptance of appraisal values on financial statements; 2 CSR 60-4.130; 7/2/18
 application of law; 2 CSR 60-4.016; 7/2/18
 daily position record; 2 CSR 60-5.040; 7/2/18
 general organization; 2 CSR 60-1.010; 7/2/18
 grain sampling; 2 CSR 60-2.010; 7/2/18
 insurance deductible; 2 CSR 60-4.170; 7/2/18
 notification of destruction or damage to grain; 2 CSR 60-4.070; 7/2/18
 safety requirements; 2 CSR 60-4.060; 7/2/18
 scale tickets; 2 CSR 60-4.090; 7/2/18
 storage space approval; 2 CSR 60-4.080; 7/2/18
 tariffs; 2 CSR 60-4.120; 7/2/18
 weighing of grain; 2 CSR 60-4.045; 7/2/18
market development
 guidelines for the agriMissouri matching fund program; 2 CSR 10-4.010; 4/2/18, 8/1/18
 price reporting requirements for livestock purchases by packers; 2 CSR 10-5.010; 4/2/18, 8/1/18
 public complaint handling and disposition procedure for Missouri livestock marketing law; 2 CSR 10-5.015; 4/2/18, 8/1/18
 subscription fees for the "weekly market news summary"; 2 CSR 10-2.010; 4/2/18, 8/1/18
 usage fees for the KCI multipurpose export facility; 2 CSR 10-3.010; 4/2/18, 8/1/18
milk board, state

adoption of Code of Federal Regulations Title 21 Food and Drugs, Chapter I Food and Drug Administration, Department of Health and Senior Services, Subchapter B Food for Human Consumption, Part 117 Current Good Manufacturing Practice, Hazard Analysis, and Risk Based Preventive Controls for Human Food; 2 CSR 80-2.003; 6/1/18
adoption of the *Grade "A" Pasteurized Milk Ordinance* (PMO) 2015 Revision of the United States Department of Health and Human Services, Public Health Service, Food and Drug Administration by Reference; 2 CSR 80-3.130; 6/1/18
adoption of the *Grade "A" Pasteurized Milk Ordinance* (PMO) 2017 Revision of the United States Department of Health and Human Services, Public Health Service, Food and Drug Administration 2 CSR 80-2.001; 6/1/18
 2 CSR 80-2.180; 6/1/18
adoption of the *Procedures Governing the Cooperative State-Public Health Service/Food and Drug Administration Program of the National Conference on Interstate Milk Shipments*, 2017 Revision of the United States Department of Health and Human Services, Public Health Service, Food and Drug Administration, and the National Conference on Interstate Milk Shipments 2 CSR 80-2.002; 6/1/18
 2 CSR 80-2.181; 6/1/18
animal health; 2 CSR 80-2.080; 6/1/18
definitions
 2 CSR 80-2.010; 6/1/18
 2 CSR 80-3.010; 6/1/18
dairy manufacturing plant, dairy manufacturing farm, and personnel licensure; 2 CSR 80-6.041; 6/1/18
enforcement; 2 CSR 80-2.151; 6/1/18
enforcement interpretation; 2 CSR 80-3.120; 6/1/18
examination of milk and milk products, the 2 CSR 80-2.060; 6/1/18
 2 CSR 80-3.060; 6/1/18
future dairy farms and milk plants; 2 CSR 80-2.121; 6/1/18
inspection fee; 2 CSR 80-5.010; 6/1/18
inspection frequency and procedure; 2 CSR 80-2.050; 6/1/18
labeling; 2 CSR 80-2.040; 6/1/18
milk and milk products from points beyond the limits of routine inspection; 2 CSR 80-2.110; 6/1/18
milk and milk products which may be sold; 2 CSR 80-2.091; 6/1/18
penalty; 2 CSR 80-2.161; 6/1/18
permits; 2 CSR 80-2.030; 6/1/18
personnel health; 2 CSR 80-2.130; 6/1/18
procedure when infection is suspected; 2 CSR 80-2.141; 6/1/18
protection and transportation of raw milk and cream; 2 CSR 80-6.021; 6/1/18
rules for import milk; 2 CSR 80-4.010; 6/1/18
sale of adulterated, misbranded milk, or milk products; 2 CSR 80-2.020; 6/1/18
separability clause; 2 CSR 80-2.170; 6/1/18
specifications for the construction and operation of facilities and installation of equipment for the production and processing of manufacturing milk and milk products; 2 CSR 80-6.011; 6/1/18
standards for milk and milk products; 2 CSR 80-2.070; 6/1/18
state milk board grade "A" milk policies; 2 CSR 80-2.190; 6/1/18
transferring; delivery containers; cooling; 2 CSR 80-2.101; 6/1/18
Missouri agricultural and small business development authority amendments
 2 CSR 100-3.050; 7/16/18
 2 CSR 100-4.050; 7/16/18
applicant eligibility requirements; 2 CSR 100-2.020; 7/16/18
conditions for execution of agricultural and small business development authority agreement; 2 CSR 100-2.050; 7/16/18

- criteria relating to participating borrowers, participating lenders and agricultural development loans; 2 CSR 100-3.030; 7/16/18
- criteria relating to participating borrowers, participating lenders and small business loans; 2 CSR 100-4.030; 7/16/18
- definitions
 - 2 CSR 100-2.010; 7/16/18
 - 2 CSR 100-3.020; 7/16/18
 - 2 CSR 100-4.020; 7/16/18
- description of operation, definitions, and method of distribution and repayment of tax credits; 2 CSR 100-10.010; 7/16/18
- fees; 2 CSR 100-2.040; 7/16/18
- general organization
 - 2 CSR 100-3.010; 7/16/18
 - 2 CSR 100-4.010; 7/16/18
- procedure for the purchase or participation of eligible loans
 - 2 CSR 100-3.040; 7/16/18
 - 2 CSR 100-4.040; 7/16/18
- time and manner of filing application; 2 CSR 100-2.030; 7/16/18
- office of the director
 - description of general organization; definitions; requirements of eligibility, licensing, application for grants; procedures for grant disbursements; record keeping requirements, and verification procedures for the Missouri qualified biodiesel producer incentive program; 2 CSR 110-2.010; 7/2/18
 - description of general organization; definitions; requirements of eligibility, licensing, bonding, and application for grants; procedures for grant disbursements; record keeping requirements, and verification procedures for the Missouri qualified fuel ethanol producer incentive program; 2 CSR 110-1.010; 7/2/18
- interest defined; 2 CSR 110-4.020; 7/2/18
- nonfarming purposes interpreted; 2 CSR 110-4.030; 7/2/18
- procedure for filing; 2 CSR 110-4.040; 7/2/18
- who shall register; 2 CSR 110-4.010; 7/2/18
- plant industries
 - adoption of NOP standards, the; 2 CSR 70-16.015; 7/16/18
 - branding of treated timber; 2 CSR 70-40.040; 7/16/18
 - certificates issued as result of certification with the MDA organic program; 2 CSR 70-16.050; 7/16/18
 - certification requirements; 2 CSR 70-10.080; 7/16/18
 - complaints and investigations; 2 CSR 70-16.040; 7/16/18
 - compliance enforcement; 2 CSR 70-16.045; 7/16/18
 - control of apiary arthropod pests and diseases; 2 CSR 70-15.045; 7/16/18
 - definitions; 2 CSR 70-35.010; 7/16/18
 - definitions of the Missouri Department of Agriculture organic program; 2 CSR 70-16.010; 7/16/18
 - elimination of American foulbrood disease; 2 CSR 70-15.035; 7/16/18
 - emerald ash borer intrastate quarantine; 2 CSR 70-11.050; 7/16/18
 - general organization; 2 CSR 70-1.010; 7/16/18
 - inspection and sampling for registration; 2 CSR 70-16.065; 7/16/18
 - inspections and sampling for certification; 2 CSR 70-16.035; 7/16/18
 - japanese beetle intrastate quarantine; 2 CSR 70-11.020; 7/16/18
 - licensing; 2 CSR 70-35.031; 7/16/18
 - marketing when registered with the MDA organic program; 2 CSR 70-16.070; 7/16/18
 - MDA organic program advisory board; 2 CSR 70-16.020; 7/16/18
 - MDA organic program seal; 2 CSR 70-16.055; 7/16/18
 - organic certifying agent registration; 2 CSR 70-16.075; 7/16/18
 - pink bollworm intrastate quarantine; 2 CSR 70-11.030; 7/16/18
 - preservatives required to be registered pesticides; 2 CSR 70-40.017; 7/16/18
 - procedures for organic certification; 2 CSR 70-16.025; 7/16/18
 - producers to follow pesticide label; 2 CSR 70-40.016; 7/16/18
 - records to be maintained for certification; 2 CSR 70-16.030; 7/16/18
 - registration with the MDA organic program; 2 CSR 70-16.060; 7/16/18
 - requirements for certified commercial applicators or public operators in structural pest control; 2 CSR 70-25.070; 7/16/18
 - requirements for treated timber invoices and manifests; 2 CSR 70-40.050; 7/16/18
 - sale or distribution of wood products similar in appearance to treated timber—identification—penalties; 2 CSR 70-40.055; 7/16/18
 - standards for inspection, sampling and analyses; 2 CSR 70-40.025; 7/16/18
 - standards for treated timber; 2 CSR 70-40.015; 7/16/18
 - sustainable agriculture demonstration awards; 2 CSR 70-12.010; 7/16/18
 - treated timber definitions; 2 CSR 70-40.005; 7/16/18
- weights, measures, and consumer protection
 - ANSI K61.1-1999, safety requirements for the storage and handling of anhydrous ammonia; 2 CSR 90-11.010; 8/1/18
 - collection of inspection fees; 2 CSR 90-24.010; 8/1/18
 - definitions; 2 CSR 90-38.010; 8/1/18
 - enforcement of 2 CSR 90-38.030 stayed or enjoined; 2 CSR 90-38.050; 8/1/18
 - inspection of premises; 2 CSR 90-30.050; 8/1/18
 - measuring devices; 2 CSR 90-30.080; 8/1/18
 - meters for measurement—specifications and proving; 2 CSR 90-10.016; 8/1/18
 - Missouri egg regulations; 2 CSR 90-36.010; 8/1/18
 - national type evaluation regulation; 2 CSR 90-21.060; 8/1/18
 - NIST Handbook 130, “Uniform Packaging and Labeling Regulation”; 2 CSR 90-22.140; 8/1/18
 - NIST Handbook 130, “Uniform Regulation for the Method of Sale of Commodities”; 2 CSR 90-20.040; 8/1/18
 - NIST Handbook 133, technical procedures and methods for measuring and inspecting packages or amounts of commodities; 2 CSR 90-23.010; 8/1/18
 - price verification procedures; 2 CSR 90-25.010; 8/1/18
 - procedures; 2 CSR 90-38.030; 8/1/18
 - quality standards for motor fuels; 2 CSR 90-30.040; 4/2/18, 7/16/18
 - registration of servicepersons and service agents; 2 CSR 90-21.010; 8/1/18
 - separability and effective period; 2 CSR 90-38.040; 8/1/18
 - tank trucks and tank wagons; 2 CSR 90-30.090; 8/1/18
 - terminals; 2 CSR 90-30.100; 8/1/18
 - unattended self-service stations; 2 CSR 90-30.070; 8/1/18
 - unfair milk sales practices; 2 CSR 90-38.020; 8/1/18
- AIR CONSERVATION COMMISSION**
 - alternate emission limits; 10 CSR 10-6.100; 2/15/18, 8/1/18
 - asbestos projects
 - certification, accreditation and business exemption requirements; 10 CSR 10-6.250; 6/15/18
 - registration, abatement, notification, inspection, demolition, and performance requirements; 10 CSR 10-6.241; 6/15/18
 - certain coals to be washed; 10 CSR 10-5.130; 2/15/18, 8/1/18
 - clean air interstate rule annual NO_x trading program; 10 CSR 10-6.362; 5/15/18
 - clean air interstate rule seasonal NO_x trading program; 10 CSR 10-6.364; 5/15/18
 - clean air interstate rule SO₂ trading program; 10 CSR 10-6.366; 5/15/18
 - commercial and industrial solid waste incinerators; 10 CSR 10-6.161; 6/15/18
 - compliance monitoring usage; 10 CSR 10-6.280; 6/15/18
 - conformity of general federal actions to state implementation plans; 10 CSR 10-6.300; 6/15/18
 - construction permits by rule; 10 CSR 10-6.062; 8/1/18
 - construction permits required; 10 CSR 10-6.060; 8/1/18
 - control of emissions during petroleum liquid storage, loading and transfer; 10 CSR 10-5.220; 8/1/18
 - control of emissions from aerospace manufacture and rework facilities
 - 10 CSR 10-2.205; 8/1/18
 - 10 CSR 10-5.295; 8/1/18

control of emissions from bakery ovens
10 CSR 10-2.360; 2/15/18, 8/1/18
10 CSR 10-5.440; 5/15/18

control of emissions from batch process operations; 10 CSR 10-5.540; 6/15/18

control of emissions from industrial solvent cleaning operations; 10 CSR 10-5.455; 5/15/18

control of emissions from industrial surface coating operations
10 CSR 10-2.230; 8/1/18
10 CSR 10-5.330; 8/1/18

control of emissions from lithographic and letterpress printing operations; 10 CSR 10-2.340; 5/15/18

control of emissions from manufacture of polystyrene resin; 10 CSR 10-5.410; 5/15/18

control of emissions from polyethylene bag sealing operations; 10 CSR 10-5.360; 5/15/18

control of emissions from production of pesticides and herbicides; 10 CSR 10-2.320; 5/15/18

control of emissions from solvent cleanup operations; 10 CSR 10-2.215; 5/15/18

control of emissions from the application of automotive underbody deadeners; 10 CSR 10-2.310; 2/15/18, 8/1/18

control of emissions from the application of deadeners and adhesives; 10 CSR 10-5.370; 5/15/18

control of emissions from the manufacturing of paints, varnishes, lacquers, enamels and other allied surface coating products; 10 CSR 10-2.300; 6/15/18

control of emissions from volatile organic liquid storage; 10 CSR 10-5.500; 6/15/18

control of NO_x emissions from electric generating units and non-electric generating boilers; 10 CSR 10-6.360; 2/15/18, 8/1/18

control of NO_x emissions from large stationary internal combustion engines; 10 CSR 10-6.390; 2/15/18, 8/1/18

control of NO_x emissions from portland cement kilns; 10 CSR 10-6.380; 6/15/18

control of petroleum liquid storage, loading and transfer; 10 CSR 10-2.260; 6/15/18

control of sulfur dioxide emissions; 10 CSR 10-6.261; 8/1/18

control of sulfur emissions from stationary boilers; 10 CSR 10-5.570; 5/15/18

control of VOC emissions from traffic coatings; 10 CSR 10-5.450; 2/15/18, 8/1/18

control of volatile organic compound emissions from existing major sources; 10 CSR 10-5.520; 5/15/18

control of volatile organic compound emissions from wood furniture manufacturing operations; 10 CSR 10-5.530; 6/15/18

controlling emissions during episodes of high air pollution potential; 10 CSR 10-6.130; 6/15/18

cross-state air pollution rule annual SO₂ group 1 trading program; 10 CSR 10-6.372; 8/1/18

cross-state air pollution rule NO_x annual trading program; 10 CSR 10-6.372; 8/1/18

cross-state air pollution rule NO_x ozone season group 2 trading program; 10 CSR 10-6.372; 8/1/18

emission limitations and emissions trading of oxides of nitrogen; 10 CSR 10-6.350; 2/15/18, 8/1/18

emission standards for hazardous air pollutants; 10 CSR 10-6.080; 6/15/18

general organization; 10 CSR 10-1.010; 5/1/18

hospital, medical, infectious waste incinerators; 10 CSR 10-6.200; 5/15/18

information on sales of fuels to be provided and maintained; 10 CSR 10-5.120; 2/15/18, 8/1/18

Kansas City area transportation conformity requirements; 10 CSR 10-2.390; 5/15/18

maximum achievable control technology regulations; 10 CSR 10-6.075; 6/15/18

measurement of emissions of air contaminants; 10 CSR 10-6.180; 5/1/18

new source performance regulations; 10 CSR 10-6.070; 6/15/18

open burning requirements; 10 CSR 10-6.045; 8/1/18

operating permits; 10 CSR 10-6.065; 8/1/18

reference methods; 10 CSR 10-6.040; 5/15/18

reporting emission data, emission fees, and process information; 10 CSR 10-6.110; 5/15/18

restriction of emission of fluorides from diammonium phosphate fertilizer production; 10 CSR 10-3.160; 2/15/18, 8/1/18

restriction of emission of visible air contaminants; 10 CSR 10-6.220; 8/1/18

restriction of emissions from batch-type charcoal kilns; 10 CSR 10-6.330; 8/1/18

restriction of emissions of lead from specific lead smelter-refinery installations; 10 CSR 10-6.120; 6/15/18

restriction of particulate matter to the ambient air beyond the premises of origin; 10 CSR 10-6.170; 8/1/18

sampling methods for air pollution sources; 10 CSR 10-6.030; 5/15/18

ALCOHOL AND TOBACCO CONTROL, DIVISION OF
all licensees; 11 CSR 70-2.140; 7/16/18
salesmen; 11 CSR 70-2.200; 7/16/18

ARCHITECTS, PROFESSIONAL ENGINEERS, PROFESSIONAL LAND SURVEYORS, AND PROFESSIONAL LANDSCAPE ARCHITECTS, MISSOURI BOARD FOR
application for certificate of authority; 20 CSR 2030-10.010; 7/2/18
application, renewal, relicensure, and miscellaneous fees; 20 CSR 2030-6.015; 7/2/18
board compensation; 20 CSR 2030-1.020; 5/1/18
CLARB examinations—professional landscape architects; 20 CSR 2030-5.140; 7/2/18
code of professional conduct; 20 CSR 2030-2.010; 5/1/18
continuing education for architects; 20 CSR 2030-11.025; 5/1/18
continuing education for professional landscape architects; 20 CSR 2030-11.035; 5/1/18
continuing professional competency for professional engineers; 20 CSR 2030-11.015; 5/1/18
criteria to file application under 327.392, RSMo; 20 CSR 2030-4.050; 5/1/18
criteria to file application under section 324.008.1, RSMo, for a temporary courtesy license; 20 CSR 2030-4.055; 5/1/18
definition of baccalaureate degree from approved curriculum as used in section 327.312.1(1), RSMo; 20 CSR 2030-14.020; 5/1/18
definition of twelve semester hours of approved surveying course work as used in section 327.312.1(3), RSMo; 5/1/18
definition of twenty semester hours of approved surveying course work as used in section 327.312.1(2), RSMo; 5/1/18
design of fire suppression systems; 20 CSR 2030-21.010; 7/2/18
easements and property descriptions; 20 CSR 2030-15.020; 7/2/18
engineer of record and specialty engineers; 20 CSR 2030-21.020; 7/2/18
evaluation criteria for building design; 20 CSR 2030-2.040; 5/1/18
evaluation—comity applications—architects; 20 CSR 2030-4.060; 5/1/18
evaluation—comity applications—professional engineers; 20 CSR 2030-4.070; 5/1/18
evaluation—comity applications—professional land surveyors; 20 CSR 2030-4.080; 5/1/18
evaluation—comity applications—professional landscape architects; 20 CSR 2030-4.090; 5/1/18
filing deadline—professional engineers and professional land surveyors; 20 CSR 2030-4.010; 7/2/18
immediate personal supervision; 20 CSR 2030-13.010; 5/1/18
immediate personal supervision for professional land surveyors; 20 CSR 2030-13.020; 5/1/18
licensee's seal; 20 CSR 2030-3.060; 5/1/18
passing grade—architects; 20 CSR 2030-5.055; 7/2/18
passing of part I required—engineers; 20 CSR 2030-5.100; 7/2/18
procedural rules; 20 CSR 2030-1.030; 5/1/18
professional engineer renewal and reactivation of licensure; 20 CSR 2030-11.030; 5/1/18
professional land surveyor—professional development units; 20 CSR 2030-8.020; 7/2/18
professional land surveyor—renewal and reactivation of licensure; 20 CSR 2030-11.020; 5/1/18
public complaint handling and disposition procedure; 20 CSR 2030-12.010; 5/1/18
reexamination fees; 20 CSR 2030-6.020; 7/2/18
reexamination—land surveyor-in-training and professional land surveyor; 20 CSR 2030-5.130; 7/2/18
reexaminations—professional engineers; 20 CSR 2030-5.105; 7/2/18
renewal period; 20 CSR 2030-11.010; 5/1/18
scope of examination—professional engineers; 20 CSR 2030-5.090; 7/2/18
special examinations prohibited; 20 CSR 2030-5.010; 7/2/18

standards for admission to examination—architects; 20 CSR 2030-5.030; 7/2/18
standards for admission to examination—professional land surveyors; 20 CSR 2030-5.110; 7/2/18
standards for licensure—professional engineers; 20 CSR 2030-5.080; 7/2/18
state exam covering Chapter 327, RSMo. the board rules and ethics; 20 CSR 2030-5.160; 7/2/18

ATHLETICS, OFFICE OF

announcers; 20 CSR 2040-4.060; 5/1/18
approval of nationally recognized amateur sanctioning bodies; 20 CSR 2040-3.030; 5/1/18
attire and equipment; 20 CSR 2040-8.160; 5/1/18
contestants
20 CSR 2040-4.090; 5/1/18
20 CSR 2040-8.050; 5/1/18
definitions; 20 CSR 2040-1.021; 5/1/18
disciplinary and appeals procedure; 20 CSR 2040-7.010; 5/1/18
event permits; 20 CSR 2040-8.030; 5/1/18
facility and equipment requirements
20 CSR 2040-6.010; 5/1/18
20 CSR 2040-8.190; 5/1/18
fouls; 20 CSR 2040-8.140; 5/1/18
inspectors; 20 CSR 2040-5.010; 5/1/18
inspectors; 20 CSR 2040-8.060; 5/1/18
judges; 20 CSR 2040-8.070; 5/1/18
judges for professional boxing, professional kickboxing and professional full-contact karate; 20 CSR 2040-4.080; 5/1/18
licensing; 20 CSR 2040-8.020; 5/1/18
licenses; 20 CSR 2040-2.011; 5/1/18
matchmakers
20 CSR 2040-4.020; 5/1/18
20 CSR 2040-8.080; 5/1/18
permits; 20 CSR 2040-2.021; 5/1/18
physicians; 20 CSR 2040-8.090; 5/1/18
physicians for professional boxing, professional wrestling, professional kickboxing, and professional full-contact karate; 20 CSR 2040-4.040; 5/1/18
professional boxing, professional wrestling, professional kickboxing, and professional full-contact karate referees; 20 CSR 2040-4.030; 5/1/18
promoters
20 CSR 2040-4.015; 5/1/18
20 CSR 2040-8.100; 5/1/18
referees; 20 CSR 2040-8.110; 5/1/18
rules for bouts/contests; 20 CSR 2040-8.180; 5/1/18
rules for professional boxing; 20 CSR 2040-5.040; 5/1/18
rules for professional kickboxing and professional full-contact karate; 20 CSR 2040-5.060; 5/1/18
rules for professional wrestling; 20 CSR 2040-5.030; 5/1/18
seconds
20 CSR 2040-4.070; 5/1/18
20 CSR 2040-8.120; 5/1/18
tickets and taxes
20 CSR 2040-3.011; 5/1/18
20 CSR 2040-8.040; 5/1/18
timekeepers
20 CSR 2040-4.050; 5/1/18
20 CSR 2040-8.130; 5/1/18
weigh-ins; 20 CSR 2040-8.170; 5/1/18
weight classes; 20 CSR 2040-8.150; 5/1/18

ATTORNEY GENERAL

Notice of Periodic Review; 15 CSR 60; 7/2/18

AUDITOR, STATE

calculation and revision of property tax rates by political subdivisions other than school districts; 15 CSR 40-3.135; 3/1/18, 6/15/18
calculation and revision of property tax rates by school districts; 15 CSR 40-3.125; 3/1/18, 6/15/18
Notice of Periodic Review; 15 CSR 40; 7/2/18

CERTIFICATE OF NEED PROGRAM

application review schedule; 19 CSR 60-50; 6/1/18, 7/16/18

CHILDREN'S DIVISION

hand-up pilot program; 13 CSR 35-32.040; 2/15/18, 7/2/18

health care; 13 CSR 35-73.055; 7/16/18
hearings and judicial review; 13 CSR 35-73.017; 7/16/18
organization and administration; 13 CSR 35-73.020; 7/16/18

CHILD SUPPORT ENFORCEMENT

standard procedures for handling cash receipts in circuit clerks' offices under contract with the Missouri Division of Child Support enforcement for the provision of IV-D services; 13 CSR 30-2.030; 6/1/18
standard procedures for handling cash receipts in prosecuting attorneys' offices under contract with the Missouri Division of Child Support enforcement for the provision of IV-D services; 13 CSR 30-2.040; 6/1/18

CHIROPRACTIC EXAMINERS, STATE BOARD OF

fees; 20 CSR 2070-2.090; 11/1/16

CLEAN WATER COMMISSION

alternative sewer systems; 10 CSR 20-8.125; 7/16/18
biological treatment; 10 CSR 20-8.180; 7/16/18
certification of concentrated animal feeding operation waste management system operators; 10 CSR 20-14.020; 7/16/18
certification of wastewater operators; 10 CSR 20-9.030; 7/16/18
classification of concentrated animal feeding operation waste management systems; 10 CSR 20-14.010; 7/16/18
classification of wastewater treatment systems; 10 CSR 20-9.020; 7/16/18
class III mineral resources injection/production well operating permits; 10 CSR 20-6.090; 7/16/18
clean water commission appeals and requests for hearings; 10 CSR 20-1.020; 2/1/18, 8/1/18
clean water state revolving fund general assistance regulation; 10 CSR 20-4.040; 7/16/18
concentrated animal feeding operations; 10 CSR 60-6.300; 7/16/18
construction and loan priority system; 10 CSR 20-4.010; 7/16/18
construction and operating permits; 10 CSR 20-6.010; 7/16/18
definitions; 10 CSR 20-2.010; 6/1/18
design of animal waste management systems; 10 CSR 20-8.300; 7/16/18
design of small sewage works; 10 CSR 20-8.020; 7/16/18
design requirements for agrichemical facilities; 10 CSR 20-8.500; 7/16/18
direct loan program; 10 CSR 20-4.041; 7/16/18
disinfection; 10 CSR 20-8.190; 7/6/18
effluent regulations; 10 CSR 20-7.015; 7/16/18
engineering—reports, plans, and specifications; 10 CSR 20-8.110; 7/16/18
environmental review; 10 CSR 20-4.050; 7/16/18
fees; 10 CSR 20-6.011; 7/16/18
grants for sewer districts and certain small municipal sewer systems; 10 CSR 20-4.030; 7/16/18
gravity sewers; 10 CSR 20-8.120; 7/16/18
groundwater heat pump operating permits; 10 CSR 20-6.070; 7/16/18
hardship grant program; 10 CSR 20-4.043; 2/1/18, 8/1/18
industrial development program; 10 CSR 20-4.022; 2/1/18
land treatment; 10 CSR 20-8.220; 7/16/18
leveraged loan program; 10 CSR 20-4.042; 7/16/18
no-discharge permits; 10 CSR 20-6.015; 7/16/18
organization and powers; 10 CSR 20-1.010; 2/1/18, 8/1/18
preliminary treatment; 10 CSR 20-8.150; 7/16/18
public participation, hearings and notice to governmental agencies; 10 CSR 20-6.020; 7/16/18
pumping stations; 10 CSR 20-8.130; 7/16/18
sales tax exemption; 10 CSR 20-4.070; 2/1/18, 8/1/18
settling; 10 CSR 20-8.160; 7/16/18
solids handling and disposal; 10 CSR 20-8.170; 7/16/18
state construction program; 10 CSR 20-4.021; 2/1/18, 8/1/18
state match grant program; 10 CSR 20-4.020; 2/1/18, 8/1/18
state match to state revolving fund loan program; 10 CSR 20-4.049; 2/1/18, 8/1/18
storm water assistance regulations; 10 CSR 20-4.060; 2/1/18, 8/1/18
storm water grant and loan program; 10 CSR 20-4.061; 7/16/18
storm water regulations; 10 CSR 20-6.200; 7/16/18
supplemental treatment; 10 CSR 20-8.210; 7/16/18
wastewater treatment facilities; 10 CSR 20-8.140; 7/16/18
wastewater treatment lagoons and wastewater irrigation alternatives; 10 CSR 20-8.200; 7/16/18

wastewater treatment systems operation scope monitoring; 10 CSR 20-9.010; 7/16/18

CONSERVATION, DEPARTMENT OF

chronic wasting disease; management zone; 3 CSR 10-4.200; 3/15/18, 6/15/18
closed hours; 3 CSR 10-12.109; 3/15/18, 6/15/18
commercialization; 3 CSR 10-10.705; 3/15/18, 6/15/18
deer
 antlerless deer hunting permit availability; 3 CSR 10-7.437; 7/2/18
 firearms hunting season; 3 CSR 10-7.433; 7/2/18
 landowner privileges; 3 CSR 10-7.434; 7/2/18
 special harvest provisions; 3 CSR 10-7.435; 7/2/18
falconry; 3 CSR 10-9.442; 3/15/18, 6/15/18
forest cropland; 3 CSR 10-2.020; 8/1/18
general provisions; 3 CSR 10-9.105; 3/15/18, 6/15/18
hunting methods; 3 CSR 10-7.410; 3/15/18, 6/15/18

COSMETOLOGY AND BARBER EXAMINERS, BOARD OF

hearings and review; 20 CSR 2085-14.020; 4/16/18, 8/1/18
violations; 20 CSR 2085-14.010; 4/16/18, 8/1/18

DAM AND RESERVOIR SAFETY COUNCIL

appeal of action on permits; 10 CSR 22-2.100; 8/1/18
construction permit requirements; 10 CSR 22-3.040; 8/1/18
definitions; 10 CSR 22-1.020; 8/1/18
enforcement orders and enforcement procedures; 10 CSR 22-4.020; 8/1/18
general requirements; 10 CSR 22-3.020; 8/1/18
registration permit requirements; 10 CSR 22-3.030; 8/1/18
safety permit requirements; 10 CSR 22-3.050; 8/1/18
types of permits; 10 CSR 22-2.020; 8/1/18
who needs a permit; 10 CSR 22-2.010; 8/1/18

DENTAL BOARD, MISSOURI

addressing the public—dentists; 20 CSR 2110-2.110; 1/2/18, 6/1/18
addressing the public—dental hygienists; 20 CSR 2110-2.111; 1/2/18, 6/1/18
dental practices; 20 CSR 2110-2.150; 1/2/18, 6/1/18
fees; 20 CSR 2110-2.170; 3/15/18, 7/2/18
notice, change of employment—dental hygienists; 20 CSR 2110-2.140; 1/2/18, 6/1/18

DIETITIANS, STATE COMMITTEE OF

application for licensure reciprocity; 20 CSR 2115-2.010; 6/15/18
complaint handling and disposition; 20 CSR 2115-1.030; 6/15/18
examination for licensure; 20 CSR 2115-2.030; 6/15/18
general organization; 20 CSR 2115-1.010; 6/15/18
license renewal; 20 CSR 2115-2.040; 6/15/18
qualifications for licensure; 20 CSR 2115-2.020; 6/15/18

DRINKING WATER PROGRAM, PUBLIC

definitions; 10 CSR 60-2.015; 5/15/18
initial distribution system evaluation; 10 CSR 60-4.092; 2/1/18, 8/1/18
laboratory certification fee; 10 CSR 60-16.020; 5/15/18
laboratory services and program administration fees; 10 CSR 60-16.030; 5/15/18
levy and collection of the Missouri primacy fee; 10 CSR 60-16.010; 5/15/18
maximum microbiological contaminant levels and monitoring requirements; 10 CSR 60-4.020; 2/1/18, 8/1/18
plans and specifications; 10 CSR 60-10.010; 5/15/18
procedures and requirements for abatement orders; 10 CSR 60-6.050; 5/15/18
public drinking water program—description of organization and methods of operation; 10 CSR 60-1.010; 2/1/18, 8/1/18
special monitoring for unregulated chemicals; 10 CSR 60-4.110; 2/1/18, 8/1/18

ELEMENTARY AND SECONDARY EDUCATION, DEPARTMENT OF

certification requirements for initial student services certificate; 5 CSR 20-400.640; 8/1/18
certification requirements for teacher of early childhood education (birth-grade 3); 5 CSR 20-400.510; 8/1/18

certification requirements for teacher of elementary education (grades 1-6); 5 CSR 20-400.520; 8/1/18
certification requirements for teacher of special education; 5 CSR 20-400.560; 8/1/18
extraordinary cost fund; 5 CSR 20-300.140; 2/15/18; 8/1/18

ENDOWED CARE CEMETERIES

application for a license; 20 CSR 2065-2.010; 6/15/18
cemetery advisory committee; 20 CSR 2065-1.020; 6/15/18
complaint handling and disposition; 20 CSR 2065-1.050; 6/15/18
definitions; 20 CSR 2065-1.030; 6/15/18
endowed care cemetery converting to nonendowed; 20 CSR 2065-2.020; 6/15/18
fees; 20 CSR 2065-1.060; 6/15/18
license renewal; 20 CSR 2065-2.050; 6/15/18

ENERGY, DIVISION OF

definitions; 4 CSR 340-2.010; 5/1/18
definitions and general provisions—membership; 4 CSR 340-6.010; 6/1/18
energy loan program; 4 CSR 340-2; 5/15/18
energy set-aside fund; 4 CSR 340-2; 1/2/18
general provisions; 4 CSR 340-3.020; 5/1/18

ENVIRONMENTAL IMPROVEMENT AND ENERGY RESOURCES AUTHORITY, STATE

application forms and fees; 10 CSR 130.020; 8/1/18
definitions; 10 CSR 130.010; 8/1/18

ETHICS COMMISSION, MISSOURI

definitions; 1 CSR 50-5.010; 3/15/18, 6/1/18, 7/2/18
registration requirements for committees domiciled outside the state of Missouri and out-of-state committees; 1 CSR 50-5.020; 3/15/18, 6/1/18, 7/2/18

EXECUTIVE ORDERS

extends the deadline from Section 3d of Executive Order 17-03 through September 30, 2018; 18-04; 8/1/18
reauthorizes and restructures the Homeland Security Advisory Council; 18-03; 6/1/18

FAMILY SUPPORT DIVISION

application procedure for family MO HealthNet programs and the Children's Health Insurance Program (CHIP); 13 CSR 40-7.015; 6/1/18
child abuse/neglect central registry checks for child care employees and volunteers; 13 CSR 40-59.050; 4/2/18
child care licensing review board
 13 CSR 40-61.065; 4/2/18
 13 CSR 40-62.062; 4/16/18
compensation for legal representation of general relief recipient in successful supplemental security income appeal; 13 CSR 40-2.290; 2/15/18, 7/2/18
criminal and child abuse/neglect central registry checks for foster, adoptive and relative care providers; 13 CSR 40-59.030; 2/15/18, 7/2/18
definitions; 13 CSR 40-59.020; 2/15/18, 7/2/18
definitions in release of information; 13 CSR 40-59.040; 4/2/18
families deemed to be receiving AFDC for purposes of Title XIX; 13 CSR 40-2.220; 2/15/18, 7/2/18
FUTURES program; 13 CSR 40-2.280; 2/15/18, 7/2/18
health care; 13 CSR 40-73.055; 7/16/18
hearings and judicial review
 13 CSR 40-61.075; 4/16/18
 13 CSR 40-62.072; 4/16/18
 13 CSR 40-73.017; 7/16/18
organization and administration; 13 CSR 40-73.020; 7/16/18
rates for foster care; 13 CSR 40-34.012; 7/16/18

GAMING COMMISSION, MISSOURI

adoption of rule 6 of U.S.T.A.; 11 CSR 45-61.030; 1/16/18, 6/1/18

agreements restricting freedom to buy and sell-prohibited; II CSR 45-30.555; 6/1/18
appeal of the decision of the judges; II CSR 45-90.020; 1/16/18, 6/1/18
appeals to the commission to be heard de novo; II CSR 45-90.030; 1/16/18, 6/1/18
appointment of racing officials and department heads; II CSR 45-62.070; 1/16/18, 6/1/18
association veterinarian; II CSR 45-61.028; 1/16/18, 6/1/18
audits
 II CSR 45-8.060; 6/1/18
 II CSR 45-40.100; 4/2/18
authority of supervisor; II CSR 45-14.030; 1/16/18, 6/1/18
betting explanation; II CSR 45-80.150; 1/16/18, 6/1/18
bingo on military installations; II CSR 45-30.500; 1/16/18, 6/1/18
bleeder list; II CSR 45-70.040; 1/16/18, 6/1/18
cash reserve and segregated account requirements; II CSR 45-40.060; 7/2/18
cash reserve requirements; II CSR 45-8.150; 6/1/18
certain transactions involving slot machines; II CSR 45-10.055; 4/2/18
claiming; II CSR 45-70.012; 1/16/18, 6/1/18
clerk of the scales; II CSR 45-61.024; 1/16/18, 6/1/18
code of ethics; II CSR 45-1.015; 6/1/18
collection and enforcement; II CSR 45-11.160; 4/2/18
commission approval of internal control system; II CSR 45-9.040; 4/2/18
commission laboratory; II CSR 45-60.040; 1/16/18, 6/1/18
commission may require certain persons to provide information;
 II CSR 45-16.060; 1/16/18, 6/1/18
commission offices; II CSR 45-62.020; 1/16/18, 6/1/18
commission officials; II CSR 45-60.010; 1/16/18, 6/1/18
commission records; II CSR 45-3.010; 4/2/18
commission veterinarian; II CSR 45-60.030; 1/16/18, 6/1/18
communication system; II CSR 45-62.230; 1/16/18, 6/1/18
competitiveness standards; II CSR 45-4.070; 1/16/18, 6/1/18
compliance with this chapter; II CSR 45-7.150; 4/2/18
condition book; II CSR 45-62.090; 1/16/18, 6/1/18
conflict between U.S.T.A. and commission rules; II CSR 45-60.060; 1/16/18, 6/1/18
count room-characteristics; II CSR 45-8.100; 4/2/18
coupled betting interests; II CSR 45-80.220; 1/16/18, 6/1/18
daily double pool; II CSR 45-80.060; 1/16/18, 6/1/18
definition of licensee; II CSR 45-9.010; 4/2/18
definitions
 II CSR 45-1.090; 6/1/18
 II CSR 45-16.010; 1/16/18, 6/1/18
deposit account-taxes and fees; II CSR 45-11.020; 4/2/18
designated security officer trained in basic life support and first aid required; II CSR 45-7.160; 6/1/18
destruction of counterfeit chips and tokens; II CSR 45-5.170; 4/2/18
detention enclosure; II CSR 45-62.150; 1/16/18, 6/1/18
determination to seek supervisor; II CSR 45-14.020; 1/16/18, 6/1/18
disassociated persons list created-right to remove from premises;
 II CSR 45-17.010; 4/2/18
dice specifications; II CSR 45-5.260; 6/1/18
distance poles (thoroughbred and quarter horse); II CSR 45-62.145; 1/16/18, 6/1/18
distribution of earnings to former legal owners; II CSR 45-14.050; 1/16/18, 6/1/18
driver's stand; II CSR 45-62.130; 1/16/18, 6/1/18
dock site commission facility; II CSR 45-7.090; 7/2/18
duties of specific licensees; II CSR 45-65.040; 1/16/18, 6/1/18
effect of another jurisdiction's orders; II CSR 45-10.070; 1/16/18, 6/1/18
effect of suspension or revocation on spouse; II CSR 45-60.055; 1/16/18, 6/1/18
electric timing device; II CSR 45-62.200; 1/16/18, 6/1/18
ejection; II CSR 45-62.030; 1/16/18, 6/1/18
ejection of patrons; II CSR 45-67.010; 1/16/18, 6/1/18
emergency situations; II CSR 45-80.230; 1/16/18, 6/1/18
enrollment of attorneys and scope of practice; II CSR 45-1.040; 1/16/18, 6/1/18
estoppel; II CSR 45-11.180; 1/16/18, 6/1/18
exacta pool (also known as perfecta); II CSR 45-80.080; 1/16/18, 6/1/18
excursion liquor license and definitions; II CSR 45-12.020; 4/2/18
excursions during inclement weather or mechanical difficulties;
 II CSR 45-6.060; 1/16/18, 6/1/18
exemptions; II CSR 45-11.170; 1/16/18, 6/1/18
expiration of temporary license; II CSR 45-4.085; 4/2/18
extension of time for reporting; II CSR 45-8.160; 1/16/18, 6/1/18
failure to comply-consequences; II CSR 45-16.090; 1/16/18, 6/1/18
failure to file return or pay tax or fee; II CSR 45-11.130; 4/2/18
fair market value of contracts; II CSR 45-10.080; 1/16/18, 6/1/18
fees; II CSR 45-65.030; 1/16/18, 6/1/18
finder's fees; II CSR 45-5.250; 1/16/18, 6/1/18
firearms on the riverboat; II CSR 45-6.030; 6/1/18
fire protection; II CSR 45-62.180; 1/16/18, 6/1/18
forfeiture of illegal winnings; II CSR 45-5.280; 1/16/18, 6/1/18
general; II CSR 45-80.010; 1/16/18, 6/1/18
general considerations; II CSR 45-61.010; 1/16/18, 6/1/18
general provisions for class C licenses; II CSR 45-65.010; 1/16/18, 6/1/18
general requirements; II CSR 45-62.010; 1/16/18, 6/1/18
grounds' facilities, water and sewage; II CSR 45-62.160; 1/16/18, 6/1/18
hippodroming ban; II CSR 45-62.220; 1/16/18
horse identifier-thoroughbred; II CSR 45-61.023; 1/16/18, 6/1/18
information required of listed labor organization personnel; II CSR 45-16.050; 1/16/18, 6/1/18
information required of local labor organization; II CSR 45-16.040; 1/16/18, 6/1/18
interest in class A licensee prohibited; II CSR 45-16.080; 1/16/18, 6/1/18
jockey room custodian and valet attendants; II CSR 45-61.029; 1/16/18, 6/1/18
judges; II CSR 45-60.020; 1/16/18, 6/1/18
judges' summary hearings; II CSR 45-90.010; 1/16/18, 6/1/18
junket-agreements and final reports; II CSR 45-5.420; 1/16/18, 6/1/18
junket enterprise; junket representative; agents; employees-policies and prohibited activities; II CSR 45-5.410; 1/16/18, 6/1/18
junket, junket enterprises, junket representatives-definitions;
 II CSR 45-5.400; 1/16/18, 6/1/18
licensee's and applicant's duty to disclose changes in information;
 II CSR 45-10.020; 7/2/18
licenses required; II CSR 45-30.065; 6/1/18
licenses, restrictions on licenses, licensing authority of the executive director, and other definitions; II CSR 45-4.020; 6/1/18
lighting; II CSR 45-62.205; 1/16/18, 6/1/18
limited license; II CSR 45-6.050; 1/16/18, 6/1/18
listening devices; II CSR 45-62.250; 1/16/18, 6/1/18
list of barred persons; II CSR 45-10.115; 1/16/18, 6/1/18
maintenance and testing; II CSR 45-7.100; 4/2/18
mandatory count procedure; II CSR 45-8.090; 6/1/18
minimum internal control standards (MICS)-Chapter A; II CSR 45-9.101; 6/1/18
minimum internal control standards (MICS)-Chapter T; II CSR 45-9.120; 6/1/18
minimum wager and payoff; II CSR 45-80.130; 1/16/18, 6/1/18
numbers of races per performance; II CSR 45-62.060; 1/16/18, 6/1/18
occupational and key person/key business entity license application and annual fees; II CSR 45-4.380; 6/1/18
occupational licenses for class A, class B, and suppliers; II CSR 45-4.260; 6/1/18
odds or payoffs posted; II CSR 45-80.140; 1/16/18, 6/1/18
operational fees; II CSR 45-40.070; 4/2/18
other taxes and fees; II CSR 45-11.080; 4/2/18
over and under payments of payoffs; II CSR 45-80.210; 1/16/18, 6/1/18
package deals and tying arrangements prohibited; II CSR 45-30.480; 6/1/18
paddock judge-thoroughbred; II CSR 45-61.022; 1/16/18, 6/1/18
pari-mutuel ticket sales; II CSR 45-80.170; 1/16/18, 6/1/18

patrol and placing judges; 11 CSR 45-61.027; 1/16/18, 6/1/18
 patrol judge's communication; 11 CSR 45-62.210; 1/16/18, 6/1/18
 patrons unlawfully on excursion gambling boat—not eligible for
 gambling game winnings; 11 CSR 45-5.065; 6/1/18
 payment; 11 CSR 45-80.180; 1/16/18, 6/1/18
 payment—gaming tax; 11 CSR 45-11.030; 4/2/18
 payment of purses; 11 CSR 45-62.260; 1/16/18, 6/1/18
 penalties; 11 CSR 45-30.535; 4/2/18
 penalties and interest; 11 CSR 45-11.120; 4/2/18
 photo-finish equipment; 11 CSR 45-62.100; 1/16/18, 6/1/18
 photograph posted; 11 CSR 45-62.120; 1/16/18, 6/1/18
 place pool; 11 CSR 45-80.040; 1/16/18, 6/1/18
 policies 11 CSR 45-5.053; 4/2/18
 policy; 11 CSR 45-14.010; 1/16/18, 6/1/18
 pools authorized; 11 CSR 45-80.020; 1/16/18, 6/1/18
 pools dependent upon entries; 11 CSR 45-80.160; 1/16/18, 6/1/18
 posting of address of commission; 11 CSR 45-5.020; 1/16/18,
 6/1/18
 primary and secondary liability; 11 CSR 45-62.240; 1/16/18,
 6/1/18
 procedure for applying for placement on list of disassociated
 persons; 11 CSR 45-17.020; 4/2/18
 procedures for disciplinary actions and hearings; 11 CSR 45-
 31.005; 1/16/18, 6/1/18
 program; 11 CSR 45-62.055; 1/16/18, 6/1/18
 prohibited acts; 11 CSR 45-65.035; 1/16/18, 6/1/18
 promotional activities; 11 CSR 45-5.181; 6/1/18
 public information; 11 CSR 45-62.050; 1/16/18, 6/1/18
 purpose of surveillance; 11 CSR 45-7.020; 4/2/18
 quinella pool; 11 CSR 45-80.070; 1/16/18, 6/1/18
 race cancelled; 11 CSR 45-80.110; 1/16/18, 6/1/18
 racing secretary; 11 CSR 45-61.020; 1/16/18, 6/1/18
 racing secretary (thoroughbred); 11 CSR 45-61.021; 1/16/18,
 6/1/18
 racing surfaces; 11 CSR 45-62.040; 1/16/18, 6/1/18
 refunds; 11 CSR 45-80.100; 1/16/18, 6/1/18
 registration exemption; 11 CSR 45-16.030; 1/16/18, 6/1/18
 registration required; 11 CSR 45-16.020; 1/16/18, 6/1/18
 remission of outs and breakage; 11 CSR 45-80.250; 1/16/18,
 6/1/18
 requests for exemptions; 11 CSR 45-7.140; 1/16/18, 6/1/18
 required revisions of list; 11 CSR 45-16.070; 1/16/18, 6/1/18
 responsibility for posting results; 11 CSR 45-80.190; 1/16/18,
 6/1/18
 return and payment—admission fee; 11 CSR 45-11.070; 4/2/18
 rules of racing
 harness; 11 CSR 45-70.010; 1/16/18, 6/1/18
 thoroughbred and quarter horse; 11 CSR 45-70.011; 1/16/18,
 6/1/18
 safety and environment; 11 CSR 45-6.010; 6/1/18
 safety and medical aid; 11 CSR 45-62.170; 1/16/18, 6/1/18
 safety inspections; 11 CSR 45-6.025; 6/1/18
 safety standards; 11 CSR 45-6.020; 6/1/18
 show pool; 11 CSR 45-80.050; 1/16/18, 6/1/18
 specific licenses; 11 CSR 45-65.020; 1/16/18, 6/1/18
 stable and ground security; 11 CSR 45-62.190; 1/16/18, 6/1/18
 standard financial and statistical reports; 11 CSR 45-8.050; 6/1/18
 stands for officials—thoroughbred and quarter horse; 11 CSR 45-
 62.035; 1/16/18, 6/1/18
 starter; 11 CSR 45-61.025; 1/16/18, 6/1/18
 starting gate; 11 CSR 45-62.140; 1/16/18, 6/1/18
 stewards; 11 CSR 45-60.025; 1/16/18, 6/1/18
 supplier license; 11 CSR 45-30.523; 6/1/18
 surveillance logs; 11 CSR 45-7.070; 4/2/18
 suspensions; 11 CSR 45-60.050; 1/16/18, 6/1/18
 table game cards—receipt, storage, inspections, and removal from
 use; 11 CSR 45-5.184; 6/1/18
 temporary supplier's license; 11 CSR 45-4.210; 6/1/18
 termination; 11 CSR 45-14.040; 1/16/18, 6/1/18
 thoroughbred association officials; 11 CSR 45-61.015; 1/16/18,
 6/1/18
 timer; 11 CSR 45-61.026; 1/16/18, 6/1/18
 tips and gifts; 11 CSR 45-8.130; 6/1/18

totalisator breakdown; 11 CSR 45-80.120; 1/16/18, 6/1/18
 totalisator employees; 11 CSR 45-80.240; 1/16/18, 6/1/18
 trifecta (triple) pool; 11 CSR 45-80.090; 1/16/18, 6/1/18
 trust funds; 11 CSR 45-62.080; 1/16/18, 6/1/18
 twin trifecta (double triple) pool; 11 CSR 45-80.091; 1/16/18,
 6/1/18
 verification of payoffs; 11 CSR 45-80.200; 1/16/18, 6/1/18
 VTR equipment; 11 CSR 45-62.110; 1/16/18, 6/1/18
 waiver of requirements
 11 CSR 45-4.430; 1/16/18, 6/1/18
 11 CSR 45-30.520; 4/2/18
 win pool; 11 CSR 45-80.030; 1/16/18, 6/1/18

HAZARDOUS SUBSTANCE EMERGENCY RESPONSE OFFICE

authority and notification procedures; 10 CSR 24-1.010; 5/1/18

HAZARDOUS WASTE MANAGEMENT COMMISSION

abandoned or uncontrolled hazardous waste disposal sites; 10 CSR
 25-10.010; 7/16/18
 applicability; 10 CSR 25-17.010; 2/15/18, 7/16/18
 application procedures; 10 CSR 25-17.090; 2/15/18, 7/16/18
 claims; 10 CSR 25-17.150; 2/15/18, 7/16/18
 closure of facilities; 10 CSR 25-17.070; 2/15/18, 7/16/18
 definitions; 10 CSR 25-17.020; 2/15/18, 7/16/18
 definitions modifications to incorporations and confidential business
 information; 10 CSR 25-3.260; 7/16/18
 electronics scrap management; 10 CSR 25-19.010; 5/1/18
 eligible costs; 10 CSR 25-17.110; 2/15/18, 7/16/18
 fees and taxes; 10 CSR 25-12.010; 7/16/18
 general reimbursement procedures; 10 CSR 25-17.140; 2/15/18,
 7/16/18
 hazardous substance environmental remediation (voluntary cleanup
 program); 10 CSR 25-15.010; 7/16/18
 hazardous waste management commission appeals and requests for
 hearings; 10 CSR 25-2.010; 7/16/18
 hazardous waste resource recovery processes; 10 CSR 25-9.020;
 7/16/18
 interim status standards for owners and operators of hazardous waste
 treatment, storage, and disposal facilities; 10 CSR 25-
 7.265; 7/16/18
 methods for identifying hazardous waste; 10 CSR 25-4.261; 7/16/18
 Missouri administered permit programs: the hazardous waste permit
 program; 10 CSR 25-7.270; 7/16/18
 notification of abandoned sites; 10 CSR 25-17.160; 2/15/18,
 7/16/18
 organization; 10 CSR 25-1.010; 2/15/18, 7/16/18
 participation and eligibility for funding; 10 CSR 25-17.100;
 2/15/18, 7/16/18
 payment of deductible and limits on payments; 10 CSR 25-17.120;
 2/15/18, 7/16/18
 polychlorinated biphenyls; 10 CSR 25-13.010; 7/16/18
 procedures for decision making; 10 CSR 25-8.124; 7/16/18
 recycled used oil management standards; 10 CSR 25-11.279; 7/16/18
 registration and surcharges; 10 CSR 25-17.030; 2/15/18, 7/16/18
 reporting and record keeping; 10 CSR 25-17.040; 2/15/18, 7/16/18
 reporting of releases and existing contamination; 10 CSR 25-
 17.050; 2/15/18, 7/16/18
 site characterization and corrective action; 10 CSR 25-17.080;
 2/15/18, 7/16/18
 site prioritization and completion; 10 CSR 25-17.060; 2/15/18,
 7/16/18
 standards applicable to generators of hazardous waste; 10 CSR 25-
 5.262; 7/16/18
 standards for owners and operators of hazardous waste treatment,
 storage, and disposal facilities; 10 CSR 25-7.264; 7/16/18
 standards for the management of specific hazardous wastes and spe-
 cific types of hazardous waste management facilities; 10
 CSR 25-7.266; 7/16/18
 standards for transporters of hazardous waste; 10 CSR 25-6.263;
 7/16/18
 standards for universal waste management; 10 CSR 25-16.273;
 7/16/18

suspension of collection of surcharges; reinstatement; 10 CSR 25-17.130; 2/15/18, 7/16/18
violations of dry cleaning remediation laws; 10 CSR 25-17.170; 2/15/18, 7/16/18
voting procedures; 10 CSR 25-2.010; 7/16/18

HEALING ARTS, STATE BOARD OF REGISTRATION FOR
collaborative practice; 20 CSR 2150-5.100; 5/15/18

HEALTH AND SENIOR SERVICES

injury prevention, head injury rehabilitation and local health services, division of

patient rights regarding health care decisions; 19 CSR 50-10.020; 2/15/18, 7/16/18

standard means test for patients; 19 CSR 50-10.010; 2/15/18, 7/16/18

volunteer health care workers in a school; 19 CSR 50-3.010; 2/15/18, 7/16/18

maternal, child and family health, division of

payments for sexual assault forensic examinations; 19 CSR 40-10.010; 2/15/18, 7/16/18

Notice of Periodic Review; Title 19; 7/2/18

regulation and licensure

application process and requirements for licensure of risk assessors who possessed a valid Missouri lead inspector license on August 28, 1998; 19 CSR 30-70.200; 2/15/18, 7/16/18

ST-segment elevation myocardial infarction (STEMI) center designation application and review; 19 CSR 30-40.750; 3/15/18, 7/16/18

trauma center designation requirements; 19 CSR 30-40.420; 3/15/18, 7/16/18

senior Rx program, Missouri

appeal process

19 CSR 90-1.090; 2/15/18, 7/16/18

19 CSR 90-2.050; 2/15/18, 7/16/18

authorized agent; 19 CSR 90-1.060; 2/15/18, 7/16/18

claimant's responsibilities; 19 CSR 90-1.040; 2/15/18, 7/16/18

definitions

19 CSR 90-1.010; 2/15/18, 7/16/18

19 CSR 90-2.010; 2/15/18, 7/16/18

eligibility and application process

19 CSR 90-1.020; 2/15/18, 7/16/18

19 CSR 90-2.020; 2/15/18, 7/16/18

general payment provisions; 19 CSR 90-1.030; 2/15/18, 7/16/18

process for reenrollment into the program; 19 CSR 90-1.050; 2/15/18, 7/16/18

program identification card; 19 CSR 90-1.070; 2/15/18, 7/16/18

responsibilities of enrolled participating pharmacies; 19 CSR 90-2.030; 2/15/18, 7/16/18

termination from the program; 19 CSR 90-1.080; 2/15/18, 7/16/18

termination or suspension from the program; 19 CSR 90-2.040; 2/15/18, 7/16/18

senior services, division of

corporate eldercare; 19 CSR 15-4.310; 2/15/18, 7/16/18

definitions; 19 CSR 15-3.010; 2/15/18, 7/16/18

governor's advisory council on aging; 19 CSR 15-4.030; 2/15/18, 7/16/18

redemption of credits; 19 CSR 15-3.050; 2/15/18, 7/16/18

service credits; 19 CSR 15-3.040; 2/15/18, 7/16/18

sponsoring agencies; 19 CSR 15-3.020; 2/15/18, 7/16/18

volunteers; 19 CSR 15-3.030; 2/15/18, 7/16/18

HIGHER EDUCATION, DEPARTMENT OF

academic program approval; 6 CSR 10-4.010; 2/1/18

administration and operation of program; 6 CSR 10-8.020; 8/1/18

general provisions; 6 CSR 10-8.010; 8/1/18

Missouri prospective teacher loan program; 6 CSR 10-2.070; 8/1/18

HIGHWAYS AND TRANSPORTATION COMMISSION, MISSOURI

commission responsibilities and requirements; 7 CSR 10-16.035; 3/15/18

confidentiality of DBE program financial and other information; 7 CSR 10-8.161; 2/15/18, 7/16/18

DBE participation credit toward project or contract goals; 7 CSR 10-8.131; 2/15/18, 7/16/18

DBE program reporting and disclosure requirements for currently certified DBE firms; 7 CSR 10-8.071; 2/15/18, 7/16/18

definition of terms; 7 CSR 10-11.010; 6/15/18

definitions

7 CSR 10-8.011; 2/15/18, 7/16/18

7 CSR 10-16.020; 3/15/18

7 CSR 10-24.010; 1/16/18, 6/15/18

discussions; 7 CSR 10-24.330; 1/16/18, 6/15/18

effective date of the DBE program under 49 CFR part 26; 7 CSR 10-8.041; 2/15/18, 7/16/18

general; 7 CSR 10-24.020; 1/16/18, 6/15/18

general information 7 CSR 10-8.021; 2/15/18, 7/16/18

general program requirements; 7 CSR 10-19.010; 1/17/17

ineligibility complaints; 7 CSR 10-8.081; 2/15/18, 7/16/18

information exchange, general; 7 CSR 10-24.300; 1/16/18, 6/15/18

licensee responsibilities and requirements; 7 CSR 10-16.045; 3/15/18

location and relocation of private lines on state highways; 7 CSR 10-3.030; 12/15/17, 5/15/18

Missouri unified certification program; 7 CSR 10-8.061; 2/15/18, 7/16/18

MoDOT DBE program annual goals and contract goals; 7 CSR 10-8.121; 2/15/18, 7/16/18

MoDOT procedures and hearings to remove a firm's DBE eligibility; 7 CSR 10-8.091; 2/15/18, 7/16/18

ordering limitation of weights on, or closing of certain state roads; 7 CSR 10-2.020; 3/15/18

organizational conflicts of interest; 7 CSR 10-24.080; 1/16/18, 6/15/18

past performance; 7 CSR 10-24.120; 1/16/18, 6/15/18

performance of a commercially useful function by a DBE firm; 7 CSR 10-8.151; 2/15/18, 7/16/18

permit specifications for removal of plants; 7 CSR 10-13.010; 3/15/18

procedures and policies for initially certifying and recertifying disadvantaged business enterprise firms; 7 CSR 10-8.051; 2/15/18, 7/16/18

procedures for authorizing transportation corporations to enforce collection of tolls; 7 CSR 10-21.010; 4/16/18

procedures for solicitation, receipt of bids, and awards and administration of contracts; 7 CSR 10-11.020; 6/15/18

procedures for solicitations and receipt of proposals; 7 CSR 10-24.030; 1/16/18, 6/15/18

process to review, rate, and score proposals; 7 CSR 10-24.210; 1/16/18, 6/15/18

prompt payment, record keeping and audit requirements; 7 CSR 10-8.111; 2/15/18, 7/16/18

proposal evaluation factors; 7 CSR 10-24.200; 1/16/18, 6/15/18

public information; 7 CSR 10-16.025; 3/15/18

publisher responsibilities and requirements; 7 CSR 10-16.050; 3/15/18

risk allocation; 7 CSR 10-24.070; 1/16/18, 6/15/18

scope of rules; 7 CSR 10-8.005; 2/15/18, 7/16/18

selection procedures and award criteria; 7 CSR 10-24.100; 1/16/18, 6/15/18

solicitation procedures for competitive proposals; 7 CSR 10-24.110; 1/16/18, 6/15/18

state transportation assistance revolving fund; 7 CSR 10-20.010; 5/15/18

stipends; 7 CSR 10-24.060; 1/16/18, 6/15/18

the effect of a USDOT certification appeal; 7 CSR 10-8.101; 2/15/18, 7/16/18

tradeoffs in design-build contracting; 7 CSR 10-24.140; 1/16/18, 6/15/18

types of projects in which design-build contracting may be used; 7 CSR 10-24.050; 1/16/18, 6/15/18

USDOT-assisted DBE contract awards and good faith efforts; 7 CSR 10-8.141; 2/15/18, 7/16/18
 vendor suspension and debarment; 7 CSR 10-11.030; 6/15/18
 who is governed and bound by USDOT and MoDOT DBE program regulations; 7 CSR 10-8.031; 2/15/18, 7/16/18

INSURANCE

applied behavior analysis maximum benefit; 20 CSR; 3/1/18
 construction claims binding arbitration cap; 20 CSR; 12/15/17
 non-economic damages in medical malpractice cap; 20 CSR; 6/15/18
 sovereign immunity limits; 20 CSR; 12/15/17
 state legal expense fund; 20 CSR; 12/15/17

LABOR AND INDUSTRIAL RELATIONS, DEPARTMENT OF

Commission on Human Rights, Missouri

complaint, investigation, and conciliation processes; 8 CSR 60-2.025; 6/1/18
 disclosure of information in case files at hearing stage; 8 CSR 60-2.085; 6/1/18
 employment testing; 8 CSR 60-3.030; 6/1/18
 general organization; 8 CSR 60-1.010; 6/1/18
 handicap discrimination in employment; 8 CSR 60-3.060; 6/1/18
 parties at hearing; 8 CSR 60-2.045; 6/1/18
 prehearing conferences; 8 CSR 60-2.090; 6/1/18
 preservation of records and posting of posters and interpretations; 8 CSR 60-3.010; 6/1/18

labor standards, division of

administrative complaints; notices issued by the director; 8 CSR 30-4.060; 8/1/18
 applicability and definitions; 8 CSR 30-4.010; 8/1/18
 apprentices and trainees; 8 CSR 30-3.030; 8/1/18
 awards by the arbitrator; 8 CSR 30-5.030; 8/1/18
 classifications of construction work; 8 CSR 30-3.040; 8/1/18
 definitions
 8 CSR 30-2.010; 8/1/18
 8 CSR 30-3.020; 8/1/18
 filing for arbitration; 8 CSR 30-5.010; 8/1/18
 hearing procedures for arbitration; 8 CSR 30-5.020; 8/1/18
 minimum wage rates; 8 CSR 30-4.020; 8/1/18
 occupational titles of work descriptions; 8 CSR 30-3.060; 8/1/18
 organization of the Division of Labor Standards; 8 CSR 30-1.010; 8/1/18
 posting of prevailing wage rates; 8 CSR 30-3.050; 8/1/18
 prevailing wage rates for public works projects; 8 CSR 30-3.010; 8/1/18
 reduction in minimum wage based on physical or mental disabilities; 8 CSR 30-6.010; 8/1/18
 standard practices for safety and operation; 8 CSR 30-2.020; 8/1/18
 subminimum wage rates for the physically or mentally impaired; 8 CSR 30-4.040; 8/1/18
 valuation of goods and services; 8 CSR 30-4.050; 8/1/18

LAND RECLAMATION COMMISSION (*See also MINING COMMISSION, MISSOURI*)

abandoned mine reclamation fund; 10 CSR 40-9.010; 5/1/18
 air resource protection; 10 CSR 40-3.240; 5/1/18
 annual reclamation status report; 10 CSR 40-10.090; 2/15/18, 7/2/18
 backfilling and grading requirements; 10 CSR 40-2.040; 2/15/18, 7/2/18
 casing and sealing of exposed underground openings; 10 CSR 40-3.180; 5/1/18

coal recovery, land reclamation and cessation of operation for underground operations; 10 CSR 40-3.310; 5/1/18
 dams constructed of or impounding waste material; 10 CSR 40-2.070; 2/15/18, 7/2/18
 definitions; 10 CSR 40-2.010; 2/15/18, 7/2/18
 disposal of underground development waste and excess spoil; 10 CSR 40-3.220; 5/1/18
 general obligations for permits, maps, signs and markers; 10 CSR 40-2.020; 2/15/18, 7/2/18
 inspection authority and right of entry; 10 CSR 40-10.060; 2/15/18, 7/2/18
 organization and method of operation; 10 CSR 40-1.010; 2/15/18, 7/2/18
 postmining land use requirements for underground operations; 10 CSR 40-3.300; 5/1/18
 prime farmlands performance requirements; 10 CSR 40-2.110; 2/15/18, 7/2/18
 protection of the hydrologic system by water quality standards and effluent limitations; 10 CSR 40-2.060; 2/15/18, 7/2/18
 requirements for backfilling and grading for underground operations; 10 CSR 40-3.260; 5/1/18
 requirements for protection of the hydrologic balance for underground operations; 10 CSR 40-3.200; 5/1/18
 requirements for road and other transportation associated with underground operations; 10 CSR 40-3.290; 5/1/18
 requirements for subsidence control associated with underground mining operations; 10 CSR 40-3.280; 5/1/18
 requirements for the disposal of coal processing waste for underground operations; 10 CSR 40-3.230; 5/1/18
 requirements for the protection of fish, wildlife and related environmental values and protection against slides and other damage; 10 CSR 40-3.250; 5/1/18
 requirements for the use of explosives for underground operations; 10 CSR 40-3.210; 5/1/18
 requirements for topsoil removal, storage and redistribution for underground operations; 10 CSR 40-3.190; 5/1/18
 restoration of affected land to equivalent prior use; 10 CSR 40-2.030; 2/15/18, 7/2/18
 revegetation requirements; 10 CSR 40-2.090; 2/15/18, 7/2/18
 revegetation requirements for underground operations; 10 CSR 40-3.270; 5/1/18
 steep-slope mining requirements; 10 CSR 40-2.100; 2/15/18, 7/2/18
 topsoil handling; 10 CSR 40-2.050; 2/15/18, 7/2/18
 underground mining permit applications—minimum requirements for information on environmental resources; 10 CSR 40-6.110; 5/1/18
 underground mining permit applications—minimum requirements for reclamation and operations plan; 10 CSR 40-6.120; 5/1/18
 use of explosives; 10 CSR 40-2.080; 2/15/18, 7/2/18

MENTAL HEALTH, DEPARTMENT OF

compensation to public administrators; 9 CSR 25-3.040; 4/2/18
 definitions; 9 CSR 25-2.005; 4/2/18
 definitions for fire safety rules; 9 CSR 45-5.105; 5/1/18
 fire safety for facility-based day habilitation and employment service settings; 9 CSR 45-5.110; 5/1/18
 fire safety for group homes for 4–9 people; 9 CSR 45-5.130; 5/1/18
 fire safety for group homes for 10–16 people; 9 CSR 45-5.140; 5/1/18
 fire safety for group homes for 17 or more people; 9 CSR 45-5.150; 5/1/18
 gambling disorder treatment; 9 CSR 30-3.134; 6/1/18
 general organization; 9 CSR 10-1.010; 4/16/18
 guidelines for membership on regional developmental disabilities advisory council; 9 CSR 45-6.010; 2/15/18, 6/1/18

guidelines for planning client personal spending allowances; 9 CSR 25-5.010; 4/16/18
invitation for bid evaluation and award; 9 CSR 25-2.405; 4/2/18
invitation for bid solicitation procedures; 9 CSR 25-2.305; 4/2/18
licensing advisory board; 9 CSR 40-1.118; 5/1/18
prevention programs; 9 CSR 30-3.300; 4/16/18
protest and appeal procedures; 9 CSR 25-2.505; 4/2/18
purchasing services for individuals served by the department; 9 CSR 25-2.105; 4/2/18
residential rate setting; 9 CSR 45-4.010; 5/1/18
SATOP administration and service documentation; 9 CSR 30-3.202; 4/2/18, 7/16/18
SATOP personnel; 9 CSR 30-3.204; 4/2/18, 7/16/18
SATOP structure; 9 CSR 30-3.206; 4/2/18, 7/16/18
SATOP supplemental fee; 9 CSR 30-3.208; 4/2/18, 7/16/18
substance abuse traffic offender program; 9 CSR 30-3.201; 4/2/18, 7/16/18
transition to enhanced standards of care; 9 CSR 30-3.022; 2/15/18, 6/1/18

METALLIC MINERALS WASTE MANAGEMENT

administrative penalty assessment; 10 CSR 45-3.010; 5/1/18
closure plan and inspection-maintenance plan-general requirements; 10 CSR 45-6.020; 5/1/18
general; 10 CSR 45-8.010; 5/1/18
metallic minerals waste management structures; 10 CSR 45-8.030; 5/1/18
reclamation-reuse; 10 CSR 45-8.040; 5/1/18

MINING COMMISSION, MISSOURI (See also LAND RECLAMATION COMMISSION)

acquisition of land and water for reclamation; 10 CSR 40-9.040; 5/1/18
auger mining requirements; 10 CSR 40-4.020; 5/1/18
bonding; 10 CSR 40-10.030; 5/1/18
concurrent surface and underground mining; 10 CSR 40-4.060; 5/1/18
definitions; 10 CSR 40-10.100; 5/1/18
hearings and informal conferences; 10 CSR 40-10.080; 5/1/18
in situ processing; 10 CSR 40-4.070; 5/1/18
operations on steep slopes; 10 CSR 40-4.040; 5/1/18
management and disposition of land and water; 10 CSR 40-9.050; 5/1/18
permit requirements for industrial mineral operations; 10 CSR 40-10.010; 5/1/18
permit review process; 10 CSR 40-10.040; 5/1/18
reclamation general requirements; 10 CSR 40-9.020; 5/1/18
reclamation on private lands; 10 CSR 40-9.060; 5/1/18
requirements for the disposal of excess spoil; 10 CSR 40-3.060; 5/1/18
rights of entry; 10 CSR 40-9.030; 5/1/18
underground mining permit applications; 10 CSR 40-6.100; 5/1/18
underground operations; 10 CSR 40-3.170; 5/1/18

MO HEALTHNET

duty of Medicaid participating hospitals and other vendors to assist in recovering third-party payments; 13 CSR 70-3.040; 6/1/18
enhancement pools; 13 CSR 70-15.150; 4/16/18
federal reimbursement allowance (FRA); 13 CSR 70-15.110; 8/1/18
five prescription limit per month per recipient; 13 CSR 70-20.040; 7/16/18
inpatient hospital services reimbursement plan; outpatient hospital services reimbursement methodology; 13 CSR 70-15.010; 8/1/18
list of excludable drugs excluded from coverage under the MO HealthNet pharmacy program; 13 CSR 70-20.032; 7/16/18
medicaid program coverage of investigational drugs used in the treatment of Acquired Immunodeficiency Syndrome (AIDS); 13 CSR 70-20.033; 4/16/18

MO HealthNet (Medicaid) payment for certain services furnished by certain physicians in calendar years 2013 and 2014; 13 CSR 70-25.120; 4/16/18
multiple source drugs for which there exists a federal upper limit on reimbursement; 13 CSR 70-20.071; 4/16/18
participating drug vendors; 13 CSR 70-20.010; 4/16/18
pediatric nursing care plan; 13 CSR 70-10.050; 2/15/18, 7/2/18
prospective outpatient hospital services reimbursement methodology; 13 CSR 70-15.160; 6/1/18
reimbursement for medicaid children's clinic services; 13 CSR 70-93.010; 2/15/18, 7/2/18
reimbursement for medicaid family health clinic program; 13 CSR 70-93.020; 2/15/18, 7/2/18
return of drugs; 13 CSR 70-20.050; 6/1/18
telehealth services; 13 CSR 70-3.190; 7/16/18
thirty-one day supply maximum restriction on pharmacy services reimbursed by the MO HealthNet Division; 13 CSR 70-20.045; 6/1/18
title XIX recipient lock-in program; 13 CSR 70-4.070; 7/16/18

MOTOR CARRIER AND RAILROAD SAFETY

accidents
4 CSR 265-8.010; 4/16/18
7 CSR 265-8.010; 4/16/18
annual report-state statistics; 4 CSR 265-8.090; 4/16/18
approved installation of stop signs at highway-rail grade crossings; 4 CSR 265-2.322; 4/16/18
changes to highway-rail grade crossing active warning devices
4 CSR 265-2.324; 4/16/18
7 CSR 265-8.324; 4/16/18
dedicated railroad telephone
4 CSR 265-8.012; 4/16/18
7 CSR 265-8.012; 4/16/18
definitions
4 CSR 265-2.010; 4/16/18
7 CSR 265-8.005; 4/16/18
facilities for employees; 4 CSR 265-8.050; 4/16/18
first-aid kits
4 CSR 265-8.140; 4/16/18
7 CSR 265-8.140; 4/16/18
grade crossing account; 4 CSR 265-8.070; 4/16/18
grade crossing construction and maintenance
4 CSR 265-8.130; 4/16/18
7 CSR 265-8.130; 4/16/18
grade crossing safety account
4 CSR 265-8.071; 4/16/18
7 CSR 265-8.071; 4/16/18
hazardous material requirements; 4 CSR 265-8.120; 4/16/18
railroad-highway crossing applications
4 CSR 265-2.320; 4/16/18
7 CSR 265-8.320; 4/16/18
railroad-highway grade crossing warning systems
4 CSR 265-8.080; 4/16/18
7 CSR 265-8.080; 4/16/18
railroad reports
4 CSR 265-8.092; 4/16/18
7 CSR 265-8.092; 4/16/18
railroad safety applications (other than railroad-highway crossings)
4 CSR 265-2.300; 4/16/18
7 CSR 265-8.300; 4/16/18
required equipment for railroad motor cars; 4 CSR 265-8.041; 4/16/18
signs
4 CSR 265-8.018; 4/16/18
7 CSR 265-8.018; 4/16/18
structural clearances
4 CSR 265-8.060; 4/16/18
7 CSR 265-8.060; 4/16/18
temporary closing of a public grade crossing
4 CSR 265-8.032; 4/16/18
7 CSR 265-8.032; 4/16/18

track and railroad workplace safety standards

4 CSR 265-8.100; 4/16/18

7 CSR 265-8.100; 4/16/18

track switch position indicators

4 CSR 265-8.020; 4/16/18

7 CSR 265-8.020; 4/16/18

transportation of employees

4 CSR 265-8.040; 4/16/18

7 CSR 265-8.040; 4/16/18

visual obstructions at public grade crossings

4 CSR 265-8.030; 4/16/18

7 CSR 265-8.030; 4/16/18

walkway safety standards at industrial tracks

4 CSR 265-8.110; 4/16/18

7 CSR 265-8.110; 4/16/18

MOTOR VEHICLE

deletion of traffic convictions and suspension or revocation data from Missouri driver records; 12 CSR 10-24.050;

6/15/18

investment and cash management procedures; 12 CSR 10-42.060;

6/15/18

issuance of new and replacement vehicle identification numbers; 12 CSR 10-23.255; 6/15/18

out-of-state dealer request to participate in Missouri recreational vehicle show or exhibit; 12 CSR 10-26.200; 6/15/18

recognition of nonresident disabled person windshield placards; 12 CSR 10-23.275; 6/15/18

replacement vehicle identification plates; 12 CSR 10-23.180; 6/15/18

special identification numbers; 12 CSR 10-23.426; 6/15/18

use of license plates after name change; 12 CSR 10-23.290; 6/15/18

watercraft and outboard motor identification numbers; 12 CSR 10-23.270; 6/15/18

NATURAL RESOURCES, DEPARTMENT OF

application and eligibility for funds; 10 CSR 70-7.110; 2/1/18, 7/2/18

application and eligibility for SALT cost-share funds; 10 CSR 70-8.020; 2/1/18, 7/2/18

application and eligibility for SALT loan interest-share funds; 10 CSR 70-8.080; 2/1/18, 7/2/18

application to all wells; 10 CSR 23-1.020; 2/1/18, 7/2/18

availability and apportionment of funds; 10 CSR 70-7.100; 2/1/18, 7/2/18

availability and apportionment of SALT loan interest-share funds; 10 CSR 70-8.070; 2/1/18, 7/2/18

closed-loop heat pump systems that use refrigerants as the heat transfer fluid; 10 CSR 23-5.070; 6/1/18

commission administration of the SALT cost-share program; 10 CSR 70-8.060; 2/1/18, 7/2/18

commission administration of the SALT program and apportionment of SALT funds; 10 CSR 70-8.010; 2/1/18, 7/2/18

consolidation of permit processing; 10 CSR 1-3.010; 8/1/18

definitions; 10 CSR 24-2.010; 2/1/18, 7/2/18

design layout and construction of proposed practices and projects; operation and maintenance; 10 CSR 70-7.120; 2/1/18, 7/2/18

design, layout and construction of proposed water quality practices and projects; operation and maintenance for SALT loan interest-share; 10 CSR 70-8.090; 2/1/18, 7/2/18

design, layout and construction of SALT proposed practices; operation and maintenance; 10 CSR 70-8.030; 2/1/18, 7/2/18

district administration of the loan interest-share program; 10 CSR 70-7.140; 2/1/18, 7/2/18

district administration of the SALT cost-share program; 10 CSR 70-8.050; 2/1/18, 7/2/18

district administration of the SALT loan interest-share program; 10 CSR 70-8.110; 2/1/18, 7/2/18

emergency action; 10 CSR 22-4.010; 2/1/18, 7/2/18

general organization

10 CSR 1-1.010; 4/2/18

10 CSR 22-1.010; 2/1/18, 7/2/18

10 CSR 45-1.010; 2/15/18, 7/2/18

immunity of officers; 10 CSR 22-1.030; 2/1/18, 7/2/18

issuing permit renewals; 10 CSR 22-2.060; 2/1/18, 7/2/18

loan interest-share application; eligibility of costs; and reimbursement procedures; 10 CSR 70-7.130; 2/1/18, 7/2/18

minority and underrepresented scholarship program; 10 CSR 1-2.030; 2/1/18, 7/2/18

notification procedures for hazardous substance emergencies and for emergency notification of releases of hazardous substances and extremely hazardous substances; 10 CSR 24-3.010; 2/1/18, 7/2/18

organization

10 CSR 26-1.010; 2/15/18, 7/16/18

10 CSR 50-1.010; 2/1/18, 7/2/18

10 CSR 70-1.010; 2/1/18, 7/2/18

process and commission administration of the loan interest-share program; 10 CSR 70-7.150; 2/1/18, 7/2/18

process and commission administration of the SALT loan interest-share program; 10 CSR 70-8.120; 2/1/18, 7/2/18

public water supply-notification to division; 10 CSR 23-3.025; 2/1/18, 7/2/18

SALT cost-share rates and reimbursement procedures; 10 CSR 70-8.040; 2/1/18, 7/2/18

SALT loan interest-share application; eligibility of costs; and reimbursement procedures; 10 CSR 70-8.100; 2/1/18, 7/2/18

NURSING, STATE BOARD OF

administrator/faculty

20 CSR 2200-2.060; 3/15/18, 7/2/18

20 CSR 2200-3.060; 3/15/18, 7/2/18

advanced practice registered nurse; 20 CSR 2200-4.100; 8/1/18

approval

20 CSR 2200-2.010; 3/15/18, 7/2/18

20 CSR 2200-3.010; 3/15/18, 7/2/18

20 CSR 2200-8.010; 3/15/18, 7/2/18

change in sponsorship

20 CSR 2200-3.030; 3/15/18, 7/2/18

20 CSR 2200-8.030; 3/15/18, 7/2/18

change of sponsorship; 20 CSR 2200-2.030; 3/15/18, 7/2/18

clinical experiences

20 CSR 2200-2.080; 3/15/18, 7/2/18

20 CSR 2200-3.080; 3/15/18, 7/2/18

20 CSR 2200-8.080; 3/15/18, 7/2/18

collaborative practice; 20 CSR 2200-4.200; 5/15/18

definitions

20 CSR 2200-2.001; 3/15/18, 7/2/18

20 CSR 2200-3.001; 3/15/18, 7/2/18

20 CSR 2200-5.010; 6/15/18

20 CSR 2200-8.001; 3/15/18, 7/2/18

discontinuing and reopening programs

20 CSR 2200-2.020; 3/15/18, 7/2/18

20 CSR 2200-3.020; 3/15/18, 7/2/18

20 CSR 2200-8.020; 3/15/18, 7/2/18

educational program

20 CSR 2200-2.100; 3/15/18, 7/2/18

20 CSR 2200-3.100; 3/15/18, 7/2/18

20 CSR 2200-8.100; 3/15/18, 7/2/18

licensure examination performance

20 CSR 2200-2.180; 3/15/18, 7/2/18

20 CSR 2200-3.180; 3/15/18, 7/2/18

mandatory reporting rule; 20 CSR 2200-4.040; 8/1/18

multiple campuses

20 CSR 2200-2.035; 3/15/18, 7/2/18

20 CSR 2200-3.035; 3/15/18, 7/2/18

20 CSR 2200-8.035; 3/15/18, 7/2/18

organization and administration of an approved program of practical nursing

20 CSR 2200-3.050; 3/15/18, 7/2/18

20 CSR 2200-8.050; 3/15/18, 7/2/18
organization and administration of an approved program of professional nursing; 20 CSR 2200-2.050; 3/15/18, 7/2/18
physical facilities and instructional resources
20 CSR 2200-2.070; 3/15/18, 7/2/18
20 CSR 2200-3.070; 3/15/18, 7/2/18
preceptors
20 CSR 2200-2.085; 3/15/18, 7/2/18
20 CSR 2200-3.085; 3/15/18, 7/2/18
20 CSR 2200-8.085; 3/15/18, 7/2/18
program evaluation
20 CSR 2200-2.130; 3/15/18, 7/2/18
20 CSR 2200-3.130; 3/15/18, 7/2/18
program changes requiring board approval, notification, or both;
20 CSR 2200-2.040; 3/15/18, 7/2/18
20 CSR 2200-3.040; 3/15/18, 7/2/18
publications
20 CSR 2200-2.120; 3/15/18, 7/2/18
20 CSR 2200-3.120; 3/15/18, 7/2/18
public complaint handling and disposition procedure; 20 CSR 2200-4.030; 8/1/18
records
20 CSR 2200-2.110; 3/15/18, 7/2/18
20 CSR 2200-3.110; 3/15/18, 7/2/18
requirements for licensure; 20 CSR 2200-4.020; 8/1/18
students
20 CSR 2200-2.090; 3/15/18, 7/2/18
20 CSR 2200-3.090; 3/15/18, 7/2/18

OIL AND GAS COUNCIL

application for permit to drill, deepen, plug-back, or recomplete; 10 CSR 50-2.030; 8/1/18
assessment of costs; 10 CSR 50-1.050; 8/1/18
bonds; 10 CSR 50-2.020; 8/1/18
definitions; 10 CSR 50-1.030; 8/1/18
disposal of fluids by injection; 10 CSR 50-2.090; 8/1/18
drilling and completion; 10 CSR 50-2.040; 8/1/18
general procedures; 10 CSR 50-1.020; 8/1/18
injection wells, mechanical integrity testing, and well stimulation treatment; 10 CSR 50-2.055; 8/1/18
operations; 10 CSR 50-2.065; 8/1/18
operator license; 10 CSR 50-2.010; 8/1/18
record retention and reporting; 10 CSR 50-2.080; 8/1/18
shut-in wells, plugging, and conversion to water well; 10 CSR 50-2.060; 8/1/18

OPTOMETRY, STATE BOARD OF

fees; 20 CSR 2210-2.070; 6/15/18

PEACE OFFICER STANDARDS AND TRAINING PROGRAM

continuing education requirement; 11 CSR 75-15.010; 4/16/18, 8/1/18
failure to obtain continuing education training; 11 CSR 75-15.080; 4/16/18, 8/1/18
minimum standards for continuing education training; 11 CSR 75-15.020; 4/16/18, 8/1/18

PETROLEUM AND HAZARDOUS SUBSTANCE STORAGE TANKS

risk-based target levels; 10 CSR 26-2.080; 8/1/18

PETROLEUM STORAGE TANK INSURANCE FUND BOARD OF TRUSTEES

claims for cleanup costs; 10 CSR 100-5.010; 3/15/18, 8/1/18
definitions; 10 CSR 100-2.010; 3/15/18, 8/1/18
participation requirements for aboveground storage tanks; 10 CSR 100-4.020; 3/15/18, 8/1/18
participation requirements for underground storage tanks; 10 CSR 100-4.010; 3/15/18, 8/1/18

third-party claims; 10 CSR 100-5.030; 3/15/18, 8/1/18
UST operator training; 10 CSR 100-6.010; 3/15/18, 8/1/18

PHARMACY, STATE BOARD OF

administration of vaccines per protocol; 20 CSR 2220-6.050; 3/15/18
general fees; 20 CSR 2220-4.010; 4/2/18, 7/16/18

POLICE COMMISSIONERS, BOARD OF

Notice of Periodic Review; Title 17; 7/2/18

PROFESSIONAL REGISTRATION, DIVISION OF

designation of license renewal dates and related renewal information; 20 CSR 2231-2.010; 6/15/18

PROPANE SAFETY COMMISSION, MISSOURI

fiscal year July 1, 2018–June 30, 2019 budget plan; 2 CSR 90; 8/1/18

PUBLIC DEFENDER COMMISSION

Notice of Periodic Review; Title 18; 7/2/18

PUBLIC DRINKING WATER PROGRAM

administrative penalty assessment; 10 CSR 60-6.070; 7/16/18
backflow prevention assembly tester certification; 10 CSR 60-11.030; 7/16/18
certification of public water system operators; 10 CSR 60-14.020; 7/16/18
classification of public water systems and system requirements; 10 CSR 60-14.010; 7/16/18
construction authorization, final approval of construction, owner-supervised program and permit to dispense water; 10 CSR 60-3.010; 7/16/18
consumer confidence reports; 10 CSR 60-8.030; 7/16/18
continuing operating authority; 10 CSR 60-3.020; 7/16/18
disinfectant residuals, disinfection byproduct precursors and the stage 2 disinfectants/disinfection byproducts rule; 10 CSR 60-4.094; 7/16/18
disinfection requirements; 10 CSR 60-4.055; 7/16/18
drinking water state revolving fund program; 10 CSR 60-13.020; 7/16/18
environmental review; 10 CSR 60-13.030; 7/16/18
grants for public water supply districts and small municipal water supply systems; 10 CSR 60-13.010; 7/16/18
ground water rule monitoring and treatment technique requirements; 10 CSR 60-4.025; 7/16/18
maximum contaminant levels and monitoring requirements for disinfection by-products; 10 CSR 60-4.090; 7/16/18
maximum radionuclide containment levels and monitoring requirements; 10 CSR 60-4.060; 7/16/18
maximum turbidity levels and monitoring requirements and filter backwash recycling; 10 CSR 60-4.050; 7/16/18
maximum volatile organic chemical contaminant levels and monitoring requirements; 10 CSR 60-4.100; 7/16/18
operational monitoring; 10 CSR 60-4.080; 7/16/18
prevention of backflow; 10 CSR 60-11.010; 7/16/18
public notification of conditions affecting a public water supply; 10 CSR 60-8.010; 7/16/18
reporting requirements; 10 CSR 60-7.010; 7/16/18
requirements for maintaining public water system records; 10 CSR 60-9.010; 7/16/18
revised total coliform rule; 10 CSR 60-4.022; 7/16/18
state loan program; 10 CSR 60-13.025; 7/16/18
source water monitoring and enhanced treatment requirements; 10 CSR 60-4.052; 7/16/18
technical, managerial, and financial capacity; 10 CSR 60-3.030; 7/16/18
waivers from baseline monitoring requirements; 10 CSR 60-6.060; 7/16/18

PUBLIC SAFETY, DEPARTMENT OF

appeals procedure and time limits for victims of crime act grant applications; 11 CSR 30-16.020; 2/1/17
approval; 11 CSR 30-3.010; 11/15/16

contract awards, monitoring and review; 11 CSR 30-8.040; 6/15/18
 definition (operation payback); 11 CSR 30-9.010; 6/15/18
 definitions; 11 CSR 30-8.010; 6/15/18
 eligibility criteria and application procedures for VOCA grants program; 11 CSR 30-16.010; 2/1/17
 eligible applicants; 11 CSR 30-8.020; 6/15/18
 notification and filing procedure; 11 CSR 30-8.030; 6/15/18
 operation payback restrictions; 11 CSR 30-9.040; 6/15/18
 organization disqualification (operation payback); 11 CSR 30-9.050; 6/15/18
 participation eligibility requirements (operation payback); 11 CSR 30-9.020; 6/15/18
 reimbursement criteria (operation payback); 11 CSR 30-9.030; 6/15/18

PUBLIC SERVICE COMMISSION

administration and enforcement; 4 CSR 240-121.020; 5/15/18
 anchoring standards; 4 CSR 240-124.045; 5/15/18
 annual reports, statements of revenue and assessments; 4 CSR 240-28.012; 5/15/18
 annual report submission requirements for electric, gas, water, sewer, and steam heating utilities; 4 CSR 240-10.145; 7/16/18
 annual report submission requirements for electric utilities; 4 CSR 240-3.165; 7/16/18
 annual report submission requirements for gas utilities; 4 CSR 240-3.245; 7/16/18
 annual report submission requirements for sewer utilities; 4 CSR 240-3.335; 7/16/18
 annual report submission requirements for steam heating utilities; 4 CSR 240-3.435; 7/16/18
 annual report submission requirements for water utilities; 4 CSR 240-3.640; 7/16/18
 audit provisions; 4 CSR 240-29.160; 5/15/18
 arbitration; 4 CSR 240-36.040; 5/15/18
 assessment requirements; 4 CSR 240-28.050; 5/15/18
 blocking traffic of origination carriers and/or traffic aggregators by transiting carriers; 4 CSR 240-29.120; 5/15/18
 blocking traffic of transiting carriers by terminating carriers; 4 CSR 240-29.140; 5/15/18
 certification or registration requirements; 4 CSR 240-28.030; 5/15/18
 certificate of service authority and/or registration; 4 CSR 240-28.011; 5/15/18
 commission approval of agreements reached by arbitration; 4 CSR 240-36.050; 5/15/18
 commission reports; 4 CSR 240-120.080; 5/15/18
 complaints and review of director action; 4 CSR 240-121.060; 5/15/18
 confidentiality; 4 CSR 240-29.150; 5/15/18
 criteria for good moral character for registration of manufactured home dealers; 4 CSR 240-121.170; 5/15/18
 database accuracy standards; 4 CSR 240-34.090; 5/15/18
 definitions
 4 CSR 240-28.010; 5/15/18
 4 CSR 240-29.020; 5/15/18
 4 CSR 240-31.010; 5/15/18
 4 CSR 240-34.020; 5/15/18
 4 CSR 240-36.010; 5/15/18
 4 CSR 240-37.020; 5/15/18
 4 CSR 240-121.010; 5/15/18
 disbursements of MoUSF funds; 4 CSR 240-31.090; 5/15/18
 electric utility fuel and purchased power cost recovery mechanisms filing and submission requirements; 4 CSR 240-3.161; 7/2/18
 drug and alcohol testing; 4 CSR 240-40.080; 7/16/18
 eligible telecommunications carrier requirements; 4 CSR 240-31.130; 5/15/18
 eligibility for funding—high cost areas; 4 CSR 240-31.040; 5/15/18

environmental improvement contingency fund; 4 CSR 240-10.095; 7/2/18
 ETC application requirements; 4 CSR 240-31.016; 5/15/18
 ETC requirements; 4 CSR 240-31.015; 5/15/18
 ETS subscriber record information requirements of resellers; 4 CSR 240-34.040; 5/15/18
 filing procedures; 4 CSR 240-36.020; 5/15/18
 filing requirements for electric, gas, water, sewer, and steam heating utility applications for authority to acquire the stock of a public utility; 4 CSR 240-10.135; 7/16/18
 filing requirements for electric, gas, water, sewer, and steam heating utility applications for authority to issue stock, bonds, notes and other evidences of indebtedness; 4 CSR 240-10.125; 7/16/18
 filing requirements for electric, gas, water, sewer, and steam heating utility applications for authority to merge or consolidate; 4 CSR 240-10.115; 7/16/18
 filing requirements for electric, gas, water, sewer, and steam heating utility applications for authority to sell, assign, lease or transfer assets; 4 CSR 240-10.105; 7/16/18
 filing requirements for electric utility applications for authority to acquire the stock of a public utility; 4 CSR 240-3.125; 7/16/18
 filing requirements for electric utility applications for authority to issue stock, bonds, notes and other evidences of indebtedness; 4 CSR 240-3.120; 7/16/18
 filing requirements for electric utility applications for authority to merge or consolidate; 4 CSR 240-3.115; 7/16/18
 filing requirements for electric utility applications for authority to sell, assign, lease or transfer assets; 4 CSR 240-3.110; 7/16/18
 filing requirements for gas utility applications for authority to acquire the stock of a public utility; 4 CSR 240-3.225; 7/16/18
 filing requirements for electric utility applications for certificates of convenience and necessity
 4 CSR 240-3.105; 5/15/18
 4 CSR 240-20.045; 5/15/18
 filing requirements for gas utility applications for authority to issue stock, bonds, notes and other evidence of indebtedness; 4 CSR 240-3.220; 7/16/18
 filing requirements for gas utility applications for authority to merge or consolidate; 4 CSR 240-3.215; 7/16/18
 filing requirements for gas utility applications for authority to sell, assign, lease or transfer assets; 4 CSR 240-3.210; 7/16/18
 filing requirements for sewer utility applications for authority to acquire the stock of a public utility; 4 CSR 240-3.325; 7/16/18
 filing requirements for sewer utility applications for authority to issue stock, bonds, notes and other evidence of indebtedness; 4 CSR 240-3.320; 7/16/18
 filing requirements for sewer utility applications for authority to merge or consolidate; 4 CSR 240-3.315; 7/16/18
 filing requirements for sewer utility applications for authority to sell, assign, lease or transfer assets; 4 CSR 240-3.310; 7/16/18
 filing requirements for steam heating utility applications for authority to issue stock, bonds, notes and other evidence of indebtedness; 4 CSR 240-3.415; 7/16/18
 filing requirements for steam heating utility applications for authority to acquire the stock of a public utility; 4 CSR 240-3.420; 7/16/18
 filing requirements for steam heating utility applications for authority to merge or consolidate; 4 CSR 240-3.410; 7/16/18
 filing requirements for steam heating utility applications for authority to sell, assign, lease or transfer assets; 4 CSR 240-3.405; 7/16/18

filing requirements for water utility applications for authority to issue stock, bonds, notes and other evidence of indebtedness; 4 CSR 240-3.615; 7/16/18

filing requirements for water utility applications for authority to acquire the stock of a public utility; 4 CSR 240-3.620; 7/16/18

filing requirements for water utility applications for authority to merge or consolidate; 4 CSR 240-3.610; 7/16/18

filing requirements for water utility applications for authority to sell, assign, lease or transfer assets; 4 CSR 240-3.605; 7/16/18

fuel and purchased power rate adjustment mechanisms ; 4 CSR 240-20.090; 7/2/18

general provisions

- 4 CSR 240-28.020; 5/15/18
- 4 CSR 240-29.030; 5/15/18
- 4 CSR 240-34.010; 5/15/18
- 4 CSR 240-37.010; 5/15/18

identification of originating carrier for traffic transmitted over the LEC-to-LEC network; 4 CSR 240-29.040; 5/15/18

incentives for acquisition of nonviable utilities; 4 CSR 240-10.085; 7/2/18

incident, annual, and safety-related condition reporting requirements; 4 CSR 240-40.020; 7/16/18

interconnection agreements; 4 CSR 240-28.080; 5/15/18

inspection of dealer books, records, inventory and premises; 4 CSR 240-121.040; 5/15/18

inspection of preowned manufactured homes rented, leased or sold or offered for rent, lease, or sale by persons other than dealers; 4 CSR 240-121.050; 5/15/18

LEC-to-LEC network, the; 4 CSR 240-29.010; 5/15/18

lifeline and disabled programs; 4 CSR 240-31.014; 5/15/18

lifeline program and disabled program; 4 CSR 240-31.120; 5/15/18

manufacturers and dealers reports; 4 CSR 240-120.070; 5/15/18

mediation; 4 CSR 240-36.030; 5/15/18

Missouri USF administration; 4 CSR 240-31.011; 5/15/18

Missouri USF assessment; 4 CSR 240-31.012; 5/15/18

Missouri USF high cost support; 4 CSR 240-31.013; 5/15/18

MoUSF, the; 4 CSR 240-31.030; 5/15/18

MoUSF assessment, the; 4 CSR 240-31.060; 5/15/18

monthly report requirement for registered manufactured home dealers; 4 CSR 240-121.180; 5/15/18

network configuration; 4 CSR 240-28.014; 5/15/18

objections to payment invoices; 4 CSR 240-29.100; 5/15/18

option to establish separate trunk groups for LEC-to-LEC telecommunications traffic; 4 CSR 240-29.050; 5/15/18

organization, powers, and meetings of the board; 4 CSR 240-31.020; 5/15/18

reclamation; 4 CSR 240-37.050; 5/15/18

repair of telecommunications facilities; 4 CSR 240-34.070; 5/15/18

reporting requirements

- 4 CSR 240-28.040; 5/15/18
- 4 CSR 240-37.060; 5/15/18

requests for review of the decisions of the North American numbering plan administrator of the thousands-block pooling administrator; 4 CSR 240-37.040; 5/15/18

requests of terminating carriers for originating tandem carriers to block traffic of originating carriers and/or traffic aggregators; 4 CSR 240-29.130; 5/15/18

requirements for E-911 service providers; 4 CSR 240-34.030; 5/15/18

review of board and MoUSFA activities; 4 CSR 240-31.110; 5/15/18

review procedures for support payments; 4 CSR 240-31.100; 5/15/18

safety standards-transportation of gas by pipeline; 4 CSR 240-40.030; 7/16/18

seals; 4 CSR 240-121.030; 5/15/18

selective routing standards; 4 CSR 240-34.080; 5/15/18

service requirements; 4 CSR 240-28.060; 5/15/18

special privacy provisions for end users who block their originating telephone number; 4 CSR 240-29.060; 5/15/18

subscriber record information and service order standards for facilities based companies; 4 CSR 240-34.050; 5/15/18

submission requirements regarding gas utility incident, annual and safety-related condition reports; 4 CSR 240-3.290; 7/16/18

submission requirements regarding gas utility written drug and alcohol testing plans; 4 CSR 240-3.280; 7/16/18

submission requirements regarding gas utility written procedures for conversion of service and uprating; 4 CSR 240-3.295; 7/16/18

submission requirements regarding plans, procedures and programs for the transportation of natural gas by pipeline; 4 CSR 240-3.270; 7/16/18

tariff filings and interconnection agreements; 4 CSR 240-28.013; 5/15/18

tariffs; 4 CSR 240-28.070; 5/15/18

telecommunications facilities standards; 4 CSR 240-34.060; 5/15/18

telephone numbering; 4 CSR 240-28.016; 5/15/18

time frame for the exchange of records, invoices, and payments for LEC-to-LEC network traffic; 4 CSR 240-29.090; 5/15/18

thousands-block number pooling; 4 CSR 240-37.030; 5/15/18

211 service

- 4 CSR 240-28.015; 5/15/18
- 4 CSR 240-28.090; 5/15/18

use of terminating record creation for LEC-to-LEC telecommunications traffic; 4 CSR 240-29.080; 5/15/18

REAL ESTATE APPRAISERS

application, certificate and license fees; 20 CSR 2245-5.020; 4/16/18, 8/1/18

definitions; 20 CSR 2245-2.010; 5/15/18

general organization; 20 CSR 2245-1.010; 5/15/18

records; 20 CSR 2245-2.030; 5/15/18

RESPIRATORY CARE, MISSOURI BOARD OF

board information-general organization; 20 CSR 2255-1.010; 4/16/18, 8/1/18

continuing education requirements; 20 CSR 2255-4.010; 4/16/18, 8/1/18

policy for release of public records; 20 CSR 2255-1.020; 4/16/18, 8/1/18

RETIREMENT SYSTEMS

administration of prior non-LAGERS retirement plans; 16 CSR 20-2.115; 6/1/18

Notice of Periodic Review; Title 16; 7/2/18

SECRETARY OF STATE

Notice of Periodic Review; 15 CSR 30; 7/2/18

SECURITIES

examination requirement; 15 CSR 30-51.030; 5/15/18

foreign issuer exemption; 15 CSR 30-54.260; 5/15/18

manual exemption; 15 CSR 30-54.100; 5/15/18

notice filings for transactions under regulation D, Rule 506; 15 CSR 30-54.210; 5/15/18

SOCIAL SERVICES, DEPARTMENT OF

direct deposit of payments; 13 CSR 10-1.015; 2/15/18, 7/2/18

SOIL AND WATER DISTRICT COMMISSION

allocation of funds; 10 CSR 70-5.010; 7/2/18

application and eligibility for funds; 10 CSR 70-5.020; 7/2/18

commission administration of the cost-share program; 10 CSR 70-5.060; 7/2/18

conduct of referendums; 10 CSR 70-2.010; 7/2/18
 conduct of supervisor elections; 10 CSR 70-2.020; 7/2/18
 cost-share rates and reimbursement procedures; 10 CSR 70-5.040; 7/2/18
 definitions; 10 CSR 70-4.010; 7/2/18
 design, layout and construction of proposed practices; operation and maintenance; 10 CSR 70-5.030; 7/2/18
 district administration of the cost-share program; 10 CSR 70-5.050; 7/2/18
 formation of soil and water conservation subdistricts; 10 CSR 70-3.010; 7/2/18
 watershed district tax levy referendums; 10 CSR 70-6.010; 7/2/18

SOLID WASTE MANAGEMENT

certified solid waste technician; 10 CSR 80-2.060; 2/1/18, 7/2/18
 demolition landfill; 10 CSR 80-4.010; 8/1/18
 design and operation; 10 CSR 80-3.010; 8/1/18
 general organization; 10 CSR 80-1.010; 2/1/18, 7/2/18
 infectious waste management; 10 CSR 80-7.010; 7/16/18
 local solid waste management; 10 CSR 80-6.010; 7/16/18
 scrap tire cleanup; 10 CSR 80-9.035; 5/15/18
 scrap tire collection centers and end-user registration; 10 CSR 80-8.020; 7/16/18
 scrap tire end-user facility registrations; 10 CSR 80-8.060; 2/1/18, 7/2/18
 scrap tire grants; 10 CSR 80-9.030; 5/15/18
 scrap tire hauler permits; 10 CSR 80-8.030; 7/16/18
 scrap tire processing permits; 10 CSR 80-8.050; 7/16/18
 solid waste management fund-financial assistance for waste reduction and recycling projects; 10 CSR 80-9.040; 2/1/18, 7/2/18
 suspension of permits; 10 CSR 80-2.050; 2/1/18, 7/2/18
 targeted recycled content newsprint; 10 CSR 80-10.040; 2/1/18, 7/2/18
 violation history; 10 CSR 80-2.070; 2/1/18, 7/2/18

STATE PARKS

acquisition of historic property; 10 CSR 90-3.020; 5/1/18
 camping and recreational activities; 10 CSR 90-2.030; 7/16/18
 definitions; 10 CSR 90-2.010; 7/16/18
 definitions-grants; 10 CSR 90-3.050; 2/1/18, 7/2/18
 definitions-revolving fund; 10 CSR 90-3.010; 5/1/18
 development of grant priorities; 10 CSR 90-3.060; 2/1/18, 7/2/18
 fencing on park-owned property; 10 CSR 90-2.070; 7/16/18
 general organization; 10 CSR 90-1.010; 2/1/18, 7/2/18
 organized group camps; 10 CSR 90-2.050; 7/16/18
 organized group center; 10 CSR 90-2.060; 2/1/18, 7/2/18
 park management; 10 CSR 90-2.020; 7/16/18
 park property; 10 CSR 90-2.040; 7/16/18
 procedures for open selection of historic preservation fund grant projects; 10 CSR 90-3.070; 2/1/18, 7/2/18
 procedures for making loans; 10 CSR 90-3.030; 5/1/18
 procedures for the awarding of historic preservation fund grants; 10 CSR 90-3.080; 2/1/18, 7/2/18

TATTOOING, BODY PIERCING, AND BRANDING, OFFICE OF

fees; 20 CSR 2267-2.020; 4/16/18, 8/1/18

TAX

adjustment to avoid double taxation; 12 CSR 10-2.025; 3/1/18, 6/15/18
 administrative and judicial review; 12 CSR 10-4.240; 3/1/18, 6/15/18
 aircraft; 12 CSR 10-4.620; 3/1/18, 6/15/18
 air pollution equipment; 12 CSR 10-3.368; 3/1/18, 6/15/18
 amended reports; 12 CSR 10-9.270; 3/1/18, 6/15/18
 amended returns; 12 CSR 10-4.175; 3/1/18, 6/15/18
 applicability of sales tax to the sale of special fuel; 12 CSR 10-3.854; 3/1/18, 6/15/18
 assessments; 12 CSR 10-9.230; 3/1/18, 6/15/18

assignments and bankruptcies; 12 CSR 10-4.210; 3/1/18, 6/15/18
 audit facilities; 12 CSR 10-3.570; 3/1/18, 6/15/18
 audits; 12 CSR 10-9.220; 3/1/18, 6/15/18
 auxiliary equipment exemption; 12 CSR 10-7.200; 3/1/18, 6/15/18
 basic steelmaking exemption-use tax; 12 CSR 10-4.630; 3/1/18, 6/15/18
 calendar month defined; 12 CSR 10-4.220; 3/1/18, 6/15/18
 cancelled sales; 12 CSR 10-4.045; 3/1/18, 6/15/18
 children in crisis tax credit; 12 CSR 10-400.210; 3/1/18, 6/15/18
 collection allowance; 12 CSR 10-4.305; 3/1/18, 6/15/18
 consideration other than money; 12 CSR 10-4.035; 3/1/18, 6/15/18
 cost of doing business; 12 CSR 10-4.050; 3/1/18, 6/15/18
 delivery; 12 CSR 10-4.020; 3/1/18, 6/15/18
 difference in basis on December 31, 1972; 12 CSR 10-2.020; 3/1/18, 6/15/18
 direct pay agreement; 12 CSR 10-4.626; 3/1/18, 6/15/18
 documentation required
 12 CSR 10-3.168; 3/1/18, 6/15/18
 12 CSR 10-4.115; 3/1/18, 6/15/18
 estimated assessment; 12 CSR 10-4.215; 3/1/18, 6/15/18
 estoppel rule; 12 CSR 10-3.579; 3/1/18, 6/15/18
 excursions; 12 CSR 10-3.182; 3/1/18, 6/15/18
 exemption certificates; 12 CSR 10-4.140; 3/1/18, 6/15/18
 extension of time to file; 12 CSR 10-9.210; 3/1/18, 6/15/18
 filing of returns and payment of tax; 12 CSR 10-4.200; 3/1/18, 6/15/18
 final determinations, hearings; 12 CSR 10-9.240; 3/1/18, 6/15/18
 form: authorization for release of confidential information; 12 CSR 10-9.130; 3/1/18, 6/15/18
 form: request for extension of time to file; 12 CSR 10-9.110; 3/1/18, 6/15/18
 form: request for franchise tax clearance; 12 CSR 10-9.120; 3/1/18, 6/15/18
 forms for franchise tax; 12 CSR 10-9.100; 3/1/18, 6/15/18
 homestead preservation credit-procedures; 12 CSR 10-405.105; 3/1/18, 6/15/18
 homestead preservation credit-procedures (2005); 12 CSR 10-405.100; 3/1/18, 6/15/18
 homestead preservation credit-qualifications and amount of credit
 12 CSR 10-405.205; 3/1/18, 6/15/18
 homestead preservation credit-qualifications and amount of credit (2005); 12 CSR 10-405.200; 3/1/18, 6/15/18
 hunting and fishing licenses; 12 CSR 10-3.252; 3/1/18, 6/15/18
 incentives for acquisition of nonviable utilities; 4 CSR 240-10.085; 7/2/18
 income tax returns may be used; 12 CSR 10-3.578; 3/1/18, 6/15/18
 information at source reporting requirements; 12 CSR 10-2.120; 3/1/18, 6/15/18
 information confidential, exceptions; 12 CSR 10-9.190; 3/1/18, 6/15/18
 intent of rules; 12 CSR 10-4.290; 3/1/18, 6/15/18
 interconnection agreements; 12 CSR 240-28.080; 5/15/18
 interest payment; 12 CSR 10-4.245; 3/1/18, 6/15/18
 jeopardy assessment; 12 CSR 10-4.205; 3/1/18, 6/15/18
 lessors and lessees of motor vehicles; 12 CSR 10-7.050; 3/1/18, 6/15/18
 liability of out-of-state vendors; 12 CSR 10-4.085; 3/1/18, 6/15/18
 liens; 12 CSR 10-4.250; 3/1/18, 6/15/18
 limitation on assessment; 12 CSR 10-4.150; 3/1/18, 6/15/18
 methods for determining special fuel used in power takeoff units; 12 CSR 10-7.150; 3/1/18, 6/15/18
 Missouri motor fuel/special fuel tax license; 12 CSR 10-7.100; 3/1/18, 6/15/18
 motor fuel and other fuels; 12 CSR 10-3.272; 3/1/18, 6/15/18
 motor vehicle purchased; 12 CSR 10-4.095; 3/1/18, 6/15/18
 no waiver of tax; 12 CSR 10-4.300; 3/1/18, 6/15/18
 out-of-state companies; 12 CSR 10-3.572; 3/1/18, 6/15/18
 overpayments; 12 CSR 10-9.260; 3/1/18, 6/15/18

payment of tax; 12 CSR 10-4.190; 3/1/18, 6/15/18
personal effects; 12 CSR 10-4.110; 3/1/18, 6/15/18
presumption; 12 CSR 10-4.120; 3/1/18, 6/15/18
purchaser includes; 12 CSR 10-4.005; 3/1/18, 6/15/18
purchaser's responsibilities; 12 CSR 10-4.010; 3/1/18, 6/15/18
questions and answers on taxation of newspapers; 12 CSR 10-3.874; 3/1/18, 6/15/18
record keeping and filing of reports; 12 CSR 10-7.030; 3/1/18, 6/15/18
record keeping requirements for microfilm and data processing systems; 12 CSR 10-3.574; 3/1/18, 6/15/18
records; 12 CSR 10-7.160; 3/1/18, 6/15/18
regulations under section 144.020, RSMo; 12 CSR 10-4.055; 3/1/18, 6/15/18
regulations under subdivisions (2) and (3) of sections 144.030 and 144.040, RSMo; 12 CSR 10-4.090; 3/1/18, 6/15/18
resale; 12 CSR 10-4.105; 3/1/18, 6/15/18
review by the Administrative Hearing Commission; 12 CSR 10-9.250; 3/1/18, 6/15/18
revocation of private rulings
 12 CSR 10-6.010; 3/1/18, 6/15/18
 12 CSR 10-7.010; 3/1/18, 6/15/18
rules; 12 CSR 10-3.002; 3/1/18, 6/15/18
sale of special fuel to dual users; 12 CSR 10-7.280; 3/1/18, 6/15/18
sales of newspapers and other publications; 12 CSR 10-3.872; 3/1/18, 6/15/18
sales of postage stamps; 12 CSR 10-3.880; 3/1/18, 6/15/18
sales tax/bank tax credit; 12 CSR 10-10.010; 3/1/18, 6/15/18
sales to national banks and other financial institutions; 12 CSR 10-4.080; 3/1/18, 6/15/18
separately stating; 12 CSR 10-4.130; 3/1/18, 6/15/18
single trip permits; 12 CSR 10-7.040; 3/1/18, 6/15/18
special fuel distributors; 12 CSR 10-7.270; 3/1/18, 6/15/18
special fuel-powered 26,000 lbs., 2-axle truck exemption-pickups and moving vehicles; 12 CSR 10-7.130; 3/1/18, 6/15/18
special fuel users not subject to licensure in their base state; 12 CSR 10-7.230; 3/1/18, 6/15/18
State Tax Commission
 agricultural land productive values; 12 CSR 30-4.010; 2/1/18, 5/15/18
 appraisal evidence; 12 CSR 30-3.065; 1/2/18, 6/1/18
 collateral estoppel; 12 CSR 30-3.025; 1/2/18, 6/1/18
 exchange of exhibits, prefiled direct testimony and objections; 12 CSR 30-3.060; 1/2/18, 6/1/18
 hearing and disposition of appeals; 12 CSR 30-3.080; 1/2/18, 6/1/18
 mediation of appeals; 12 CSR 30-3.085; 1/2/18, 6/1/18
 prehearing procedures; 12 CSR 30-3.070; 1/2/18, 6/1/18
 procedure: motions and stipulations; 12 CSR 30-3.050; 1/2/18, 6/1/18
 subpoenas and discovery; 12 CSR 30-3.040; 1/2/18, 6/1/18
 utility property to be assessed locally and by the State Tax Commission; 12 CSR 30-2.015; 1/2/18, 6/1/18
telephone service; 12 CSR 10-3.188; 3/1/18, 6/15/18
theaters—criteria for exemption; 12 CSR 10-3.614; 3/1/18, 6/15/18
trading stamps; 12 CSR 10-3.142; 3/1/18, 6/15/18, 6/15/18
truckers engaged in retail business; 12 CSR 10-3.018; 3/1/18, 6/15/18
use of motor fuel and special fuel in same vehicle; 12 CSR 10-7.070; 3/1/18, 6/15/18
vendor includes; 12 CSR 10-4.060; 3/1/18, 6/15/18
vendor's responsibility; 12 CSR 10-4.155; 3/1/18, 6/15/18
vendors use tax vs. consumers use tax; 12 CSR 10-4.127; 3/1/18, 6/15/18
vendor to file collection suit; 12 CSR 10-4.135; 3/1/18, 6/15/18
verification of fleet mileage—acceptable source documentation; 12 CSR 10-7.060; 3/1/18, 6/15/18
water pollution; 12 CSR 10-3.370; 3/1/18, 6/15/18

yearbook sales; 12 CSR 10-3.414; 3/1/18, 6/15/18

TRAFFIC AND HIGHWAY SAFETY DIVISION

approval procedure; 7 CSR 60-2.020; 4/16/18
breath alcohol ignition interlock device security; 7 CSR 60-2.050; 4/16/18
definitions; 7 CSR 60-2.010; 4/16/18
device suspension and decertification; 7 CSR 60-2.060; 4/16/18
responsibilities of authorized service providers; 7 CSR 60-2.040; 4/16/18
responsibilities of manufacturers; 7 CSR 60-2.040; 4/16/18
standards and specifications; 7 CSR 60-2.030; 4/16/18
suspension, or revocation of approval of a device; 7 CSR 60-2.060; 4/16/18

TREASURER

Notice of Periodic Review; 15 CSR 50; 7/2/18

WELL INSTALLATION

application for a permit; 10 CSR 23-1.060; 8/1/18
certification and registration; 10 CSR 23-2.020; 8/1/18
certification and registration for monitoring wells; 10 CSR 23-4.020; 8/1/18
certification and registration of heat pump systems; 10 CSR 23-5.020; 8/1/18
certification and registration reports; 10 CSR 23-3.060; 8/1/18
confidentiality of registration report forms; 10 CSR 23-6.060; 8/1/18
construction standards for closed-loop heat pump wells; 10 CSR 23-5.050; 8/1/18
construction standards for monitoring wells; 10 CSR 23-4.060; 8/1/18
construction standards for open-loop heat pump systems; 10 CSR 23-5.060; 8/1/18
construction standards for test holes; 10 CSR 23-6.040; 8/1/18
definitions
 10 CSR 23-1.010; 8/1/18
 10 CSR 23-4.010; 8/1/18
 10 CSR 23-5.010; 8/1/18
 10 CSR 23-6.010; 8/1/18
denial of application; 10 CSR 23-1.080; 8/1/18
disciplinary action; 10 CSR 23-1.075; 8/1/18
drilling areas; 10 CSR 23-3.090; 8/1/18
fee structure; 10 CSR 23-2.010; 8/1/18
general protection of groundwater quality and resources
 10 CSR 23-3.020; 8/1/18
 10 CSR 23-4.050; 8/1/18
 10 CSR 23-5.030; 8/1/18
 10 CSR 23-6.020; 8/1/18
liners; 10 CSR 23-3.080; 8/1/18
location of heat pump wells; 10 CSR 23-5.040; 8/1/18
location of test holes; 10 CSR 23-6.030; 8/1/18
location of wells
 10 CSR 23-3.010; 8/1/18
 10 CSR 23-4.030; 8/1/18
mail and notification procedures; 10 CSR 23-1.160; 8/1/18
permit renewal; 10 CSR 23-1.105; 8/1/18
permits; 10 CSR 23-1.090; 8/1/18
permittee qualifications, testing procedures, and permit application; 10 CSR 23-1.050; 8/1/18
plastic well casing; 10 CSR 23-3.070; 8/1/18
plugging of heat pump wells; 10 CSR 23-5.080; 8/1/18
plugging of monitoring wells; 10 CSR 23-4.080; 8/1/18
plugging of test holes; 10 CSR 23-6.050; 8/1/18
plugging of water wells; 10 CSR 23-3.110; 8/1/18
pump installation and wellhead completion; 10 CSR 23-3.050; 8/1/18
reinstatement; 10 CSR 23-1.130; 8/1/18
sensitive areas; 10 CSR 23-3.100; 8/1/18

standards for construction of water wells; 10 CSR 23-3.030; 8/1/18
types of wells; 10 CSR 23-1.030; 8/1/18
variances; 10 CSR 23-1.040; 8/1/18
vehicle and machine registration; 10 CSR 23-1.140; 8/1/18
well casing seals and connections; 10 CSR 23-3.040; 8/1/18
well drilling and pump installation machine registration; 10 CSR
23-1.155; 8/1/18

YOUTH SERVICES, DIVISION OF

classification criteria for placement into DYS programs; 13 CSR
110-2.040; 6/1/18
grievance procedures for committed youth in residential facilities;
13 CSR 110-2.100; 6/1/18
juvenile crime bill provisions and procedures; 13 CSR 110-6.010;
2/15/18, 7/2/18
operational procedures of the interstate compact on juveniles; 13
CSR 110-4.010; 2/15/18, 7/2/18
release of youth from DYS facilities; 13 CSR 110-2.130; 6/1/18
responsibilities of facility managers; 13 CSR 110-2.110; 2/15/18,
7/2/18
runaway and absconding youth; 13 CSR 110-2.080; 6/1/18
special or unique service needs; 13 CSR 110-2.030; 6/1/18
transfers between DYS residential and/or community based pro-
grams; 13 CSR 110-2.050; 6/1/18

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